PDRSF 11.3.46.1 V.2
2/27/2009

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

October 15, 2007

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Third Quarter 2007 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the third quarter 2007, and work planned for the fourth quarter 2007 for the McCall Oil and Chemical site in Portland, Oregon.

WORK COMPLETED THIRD QUARTER 2007

- data management and reporting
- received DEQ comments on Second Quarter 2007 Status Report in an August 21, 2007 email
- responded to DEQ comments in an August 21, 2007 email
- project management and meetings

PLANNED FOURTH QUARTER 2007 RI TASKS

- data management and reporting
- collect stormwater and catch basin sediment samples if a qualifying event occurs
- project management and meetings

RESULTS

No stormwater or groundwater samples were collected during third quarter 2007.

PROBLEMS ENCOUNTERED

No problems were encountered during third quarter 2007.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

ANCHOR
ENVIRONMENTAL, L.L.C.

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July 20, 2007
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Second Quarter 2007 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the second quarter 2007, and work planned for the third quarter 2007 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED SECOND QUARTER 2007

- data management and reporting
- April 2, 2007 met with DEQ to discuss project status and DEQ's March 5, 2007 comments on Stormwater and Catch Basin Sediment Sampling Plan
- April 9, 2007 prepared written response to DEQ's March 5, 2007 comments on Stormwater and Catch Basin Sediment Sampling Plan
- received and reviewed DEQ's April 16, 2007 Stormwater Plan approval letter
- received and reviewed DEQ's May 1, 2007 comments on the July 2004 Remedial Investigation Report
- collected stormwater and catch basin sediment samples on May 2, 2007
- project management and meetings

PLANNED THIRD QUARTER 2007 RI TASKS

- data management and reporting

- review and evaluate DEQ's May 1, 2007 comments on the July 2004 Remedial Investigation Report
- collect stormwater and catch basin sediment samples if a qualifying event occurs
- project management and meetings

RESULTS

On May 2, 2007, Anchor collected stormwater samples from locations S-2, S-3, and S-4. Location S-1 had insufficient discharge to collect a sample. Sampling results for stormwater sampling are in Tables 1 through 3. Sampling locations are shown in Figure 2.

A catch basin sediment sample was collected from stormwater sampling location S-3 above the stormwater filter. Insufficient volumes of sediment were present at locations S-1, S-2, and S-4 to allow for sample collection.

PROBLEMS ENCOUNTERED

No problems were encountered during first quarter 2007.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

Table 1
Total Petroleum Hydrocarbons
Stormwater
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Catch Basins - Storm Water µg/L (ppb)							
S-1W	12/20/00	**1,100**	Z	100	U	250	U
S-1W	03/06/02	110	U	110	U	270	U
S-1W	04/07/05	100	U	**340**	H	**880**	O
S-2W	12/20/00	100	U	100	U	250	U
S-2W	03/06/02	**130**	Z	110	U	260	U
S-2W	04/07/05	100	U	**310**	Y	**430**	O
S-2W	05/02/07	250	U	250	U	500	U
S-3W	02/15/01	**1,300**	Z	**510**	Z	250	U
S-3W	03/06/02	110	U	**110**	Z	260	U
S-3W	04/07/05	**120**	Z	**550**	Y	**1,000**	O
S-3W	05/02/07	250	U	**290**	Z	500	U
Oil/Water Separator - Storm Water							
S-4W	02/15/01	**270**	Z	**280**	Z	250	U
S-4W Duplicate	02/15/01	**260**	Z	**300**	Z	250	U
S-4W	04/09/02	**220**	H	**1,300**	F	**550**	O
S-4W	04/07/05	100	U	**440**	Y	**340**	L
S-4W	05/02/07	250	U	**1,000**	Z	**940**	Z

Notes: U = Not detected at method reporting limit. F = The fingerprint of the sample matches the elution pattern of calibration standard
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.
Z = The fingerprint does not resemble a petroleum product.
DET= Detected above method reporting limit (method reporting limit shown)
D = The reported result is from a dilution.

TABLE 2
PAHs, SVOCs, and PCBs (µg/L)
Stormwater
McCall Oil and Chemical

Sample Designation	S-1	S-1	S-1	S-2	S-2	S-2	S-2	S-3	S-3	S-3	S-3	S-4	S-4 Duplicate	S-4		S-4
	Storm Water															
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/06/02	04/07/05	12/20/00	03/06/02	04/07/05	05/02/07	12/20/00	03/06/02	04/07/05	05/02/07	12/20/00	12/20/00	04/09/02	04/07/05	05/02/07
LPAHs																
Naphthalene	0.03 J	0.03 J	0.031 J	0.07 J	0.025 J	0.012 U	0.015	0.07 J	0.025 J	0.012 U	0.0087	0.04 J	0.04 J	0.012 U	0.012 U	0.017 Ui
Acenaphthylene	0.01 J	0.01 U	0.037 J	0.02 J	0.011 U	0.026 J	0.019 D	0.10 U	0.011 U	0.011 U	0.0082 Ui	0.10 U	0.10 U	0.011 U	0.011 U	0.0077 U
Acenaphthene	0.02 J	0.01 U	0.009 U	0.02 J	0.009 U	0.009 U	0.016 U	0.10 U	0.009 U	0.009 U	0.0077 U	0.14	0.12	0.085 J	0.009 U	0.0077 U
Fluorene	0.02 J	0.01 U	0.026 J	0.04 J	0.013 U	0.012 U	0.016 U	0.02 J	0.013 U	0.012 U	0.0084	0.36	0.34	0.170 J	0.012 U	0.0077 U
Phenanthrene	0.07 J	0.03 J	0.190 J	0.25	0.043 J	0.045 J	0.027	0.20	0.054 J	0.057 J	0.024	0.46	0.35	0.073 J	0.032 J	0.033 Ui
Anthracene	0.01 U	0.02 U	0.039 J	0.02 J	0.016 U	0.015 U	0.0077 U	0.10 U	0.015 U	0.015 U	0.0077 U	0.02 J	0.01 J	0.015 U	0.015 U	0.0077 U
2-Methylnaphthalene	0.03 J	0.02 J	0.012 U	0.05 J	0.014 J	0.012 U	0.0077 U	0.10	0.012 U	0.012 U	0.0077 U	0.09 J	0.10	0.012 U	0.012 U	0.014
Total LPAH	0.176	0.078	0.323	0.470	0.082	0.071	0.061	0.386	0.079	0.057	0.041	1.110	0.960	0.328	0.032	0.014
HPAHs																
Fluoranthene	0.02 J	0.013 U	0.230	0.099	0.022 J	0.059 J	0.018	0.06 J	0.023 J	0.040 J	0.016	0.06 J	0.05 J	0.01 U	0.01 U	0.053
Pyrene	0.02 J	0.015 U	0.280	0.12	0.025 J	0.059 J	0.019	0.03 J	0.022 J	0.037 J	0.017	0.19	0.16	0.10 J	0.10 J	0.078
Benz(a)anthracene	0.005 U	0.012 U	0.081 J	0.03 J	0.013 U	0.012 U	0.0077 U	0.007 J	0.012 U	0.012 U	0.0077 U	0.03 J	0.02 J	0.012 U	0.012 U	0.012
Chrysene	0.008 J	0.014 U	0.140 J	0.06 J	0.015 U	0.014 U	0.0077 U	0.03 J	0.015 U	0.014 U	0.0085	0.12	0.09 J	0.014 U	0.014 U	0.030
Benzo(b)fluoranthene	0.006 J	0.020 U	0.150 J	0.04 J	0.021 U	0.021 J	0.0077 U	0.01 J	0.020 U	0.020 U	0.0077 U	0.03 J	0.03 J	0.020 U	0.020 U	0.034
Benzo(k)fluoranthene	0.004 J	0.020 U	0.049 J	0.03 J	0.021 U	0.020 U	0.0077 U	0.008 J	0.020 U	0.020 U	0.0077 U	0.02 J	0.01 J	0.020 U	0.020 U	0.0077 U
Benzo(a)pyrene	0.006 U	0.016 U	0.100 J	0.03 J	0.017 U	0.020 U	0.0077 U	0.095 U	0.017 U	0.016 U	0.0077 U	0.03 J	0.02 J	0.016 U	0.016 U	0.017
Indeno(1,2,3-cd)pyrene	0.006 J	0.024 U	0.089 J	0.04 J	0.026 U	0.020 U	0.0077 U	0.01 J	0.025 U	0.024 U	0.0077 U	0.02 J	0.02 J	0.024 U	0.024 U	0.020
Dibenz(a,h)anthracene	0.004 U	0.031 U	0.031 U	0.009 J	0.032 U	0.020 U	0.0077 U	0.19 U	0.031 U	0.031 U	0.0077 U	0.009 J	0.008 J	0.031 U	0.031 U	0.0077 U
Benzo(g,h,i)perylene	0.007 J	0.017 U	0.140 J	0.06 J	0.018 U	0.020 U	0.0085	0.01 J	0.017 U	0.017 U	0.0077 U	0.04 J	0.03 J	0.017 U	0.017 U	0.027
Total HPAHs	0.071		1.26	0.52	0.047	0.139	0.046	0.17	0.045	0.077	0.042	0.55	0.44	0.10	0.10	0.27
SVOCs																
3- and 4-Methylphenol Coelution	0.3 J	0.23 J	0.051 U	0.49	0.089 J	0.051 U	0.48 U	0.48 U	0.220 J	0.120 J	0.48 U	0.2 J	0.2 J	0.051 U	0.051 U	0.48 U
Dibenzofuran	0.01 J	0.014 U	0.014 U	0.02 J	0.014 U	0.014 U	0.016 U	0.01 U	0.019 J	0.014 U	0.011	0.13	0.11	0.11 J	0.01 U	0.013 Ui
Dimethyl Phthalate							0.22				0.32					0.29
Diethyl Phthalate							0.47				0.20 U					0.20 U
Di-n-butyl Phthalate							0.21				0.20 U					0.20 U
Butyl Benzyl Phthalate	0.1 J	0.19 J	0.20	0.1 J	0.05 J	0.076 J	0.20 U	0.08 J	0.092 J	0.089 J	0.20 U	0.05 J	0.04 J	0.14 J	0.10 J	0.20 U
Bis(2-ethylhexyl) Phthalate							1.4				0.96 U					0.96 U
Di-n-octyl Phthalate	0.003 U	0.032 U	0.032 U	0.003 U	0.032 U	0.11 J	0.20 U	0.95 U	0.033 U	0.032 U	0.20 U	0.95 U	0.96 U	0.032 U	0.032 U	0.20 U
Arochor 1016							0.20 U				0.20 U					0.20 U
Arochor 1221							0.39 U				0.39 U					0.39 U
Arochor 1232							0.20 U				0.20 U					0.20 U
Arochor 1242							0.20 U				0.20 U					0.20 U
Arochor 1248							0.20 U				0.20 U					0.20 U
Arochor 1254							0.20 U				0.20 U					0.20 U
Arochor 1260							0.20 U				0.20 U					0.20 U

Table 3
Metals
Stormwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Nickel	Silver	Zinc
Catch Basins - Storm Water µg/L (ppb)													
S-1W	Total	Water	12/20/00	0.5 U	0.05 U	0.4	3.8	0.43					200
S-1W	Total	Water	03/06/02	0.5 U	0.20 U	0.4	3.7	0.31					195
S-1W	Total	Water	04/07/05	0.5 U	0.16	7	13.5	27.1					86.9
S-1W	Dissolved	Water	04/07/05	0.5 U	0.07	1.3	7.9	0.61					47.8
S-2W	Total	Water	12/20/00	1 U	0.22	2.0	9.9	5.93					113
S-2W	Total	Water	03/06/02	0.5 U	0.20 U	0.6	10.3	1.13					73.3
S-2W	Total	Water	04/07/05	0.5 U	0.07	1.1	9.4	2.33					51.1
S-2W	Dissolved	Water	04/07/05	0.5 U	0.05	0.7	6.0	0.7					42.9
S-2W	Total	Water	05/02/07	0.5 U	0.12	1.1	11.3	3.20	8.36	0.2 U	1.2	0.02	149
S-2W	Dissolved	Water	05/02/07	0.5 U	0.05	0.7	8.8	0.86	3.25	0.2 U	1.2	0.02 U	101
S-3W	Dissolved	Water	12/15/00	1 U	0.63	2.9	29.6	1.62					596
S-3W	Total	Water	03/06/02	0.5 U	0.2 U	1.2	13.1	2.30					84.2
S-3W	Total	Water	04/07/05	0.5 U	1.05	1.9	8.6	4.14					189
S-3W	Dissolved	Water	04/07/05	0.5 U	0.96	1.3	7.1	1.06					182
S-3W	Total	Water	05/02/07	0.5 U	0.17	2.3	19.1	4.85	23.5	0.2 U	2.7	0.07	375
S-3W	Dissolved	Water	05/02/07	0.5 U	0.15	0.9	12.8	0.75	14.3	0.2 U	1.9	0.03	301
Oil/Water Separator - Storm Water µg/L (ppb)													
S-4W	Dissolved	Water	12/15/00	0.5 U	0.22	0.8	4.9	0.05					47.1
S-4W Duplicate	Dissolved	Water	12/15/00	0.5 U	0.21	0.6	4.7	0.04					45.0
S-4W	Total	Water	04/09/02	0.6	0.2	0.9	9	3.29					86.6
S-4W	Total	Water	04/07/05	0.5	0.19	1.1	8.3	6.15					89.8
S-4W	Dissolved	Water	04/07/05	0.5 U	0.09	0.2	4.4	0.09					46.8
S-4W	Total	Water	05/02/07	1.5	0.51	5.2	27.7	36.0	169	0.2 U	6.9	0.12	252
S-4W	Dissolved	Water	05/02/07	0.5 U	0.16	0.5	14.2	0.54	46.3	0.2 U	2.8	0.02 U	201

Note: U = not detected at method reporting limit. µg/L = micrograms per liter. ppb = parts per billion.

Table 4
Total Petroleum Hydrocarbons
Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location	Matrix	Date Sampled	TPH - FIQ Gasoline		TPH - FIQ Diesel		TPH - FIQ Heavy Fuel Oil	
Catch Basins - Sediment mg/kg (ppm)								
S-1	Soil	12/15/00	**26**	Y	**400**	H	**1900**	O
S-2	Soil	12/15/00	**21**	Y	**300**	H	**2200**	DO
S-3	Soil	12/15/00	**580**	Y	**2400**	H	**7600**	DO
S-3	Soil	11/04/04	210	U	**1600**	JH	**8500**	JO
S-3	Soil	05/02/07	14	U	**1400**	DH	**9300**	DO
S3-01C	Soil	12/15/00	10	U	10	U	**30**	Y

Notes: U = Not detected at method reporting limit. F = Fingerprit of the sample matches the elution pattern of calibration standard

L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.

H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.

O = The fingerprint resembles oil, but does not match the calibration standard.

Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.

Z = The fingerprint does not resemble a petroleum product.

D = The reported result is from a dilution.

TABLE 5
PAHs, SVOCs, and PCBs (µg/kg)
Catch Basin Sediment
McCall/GWCC

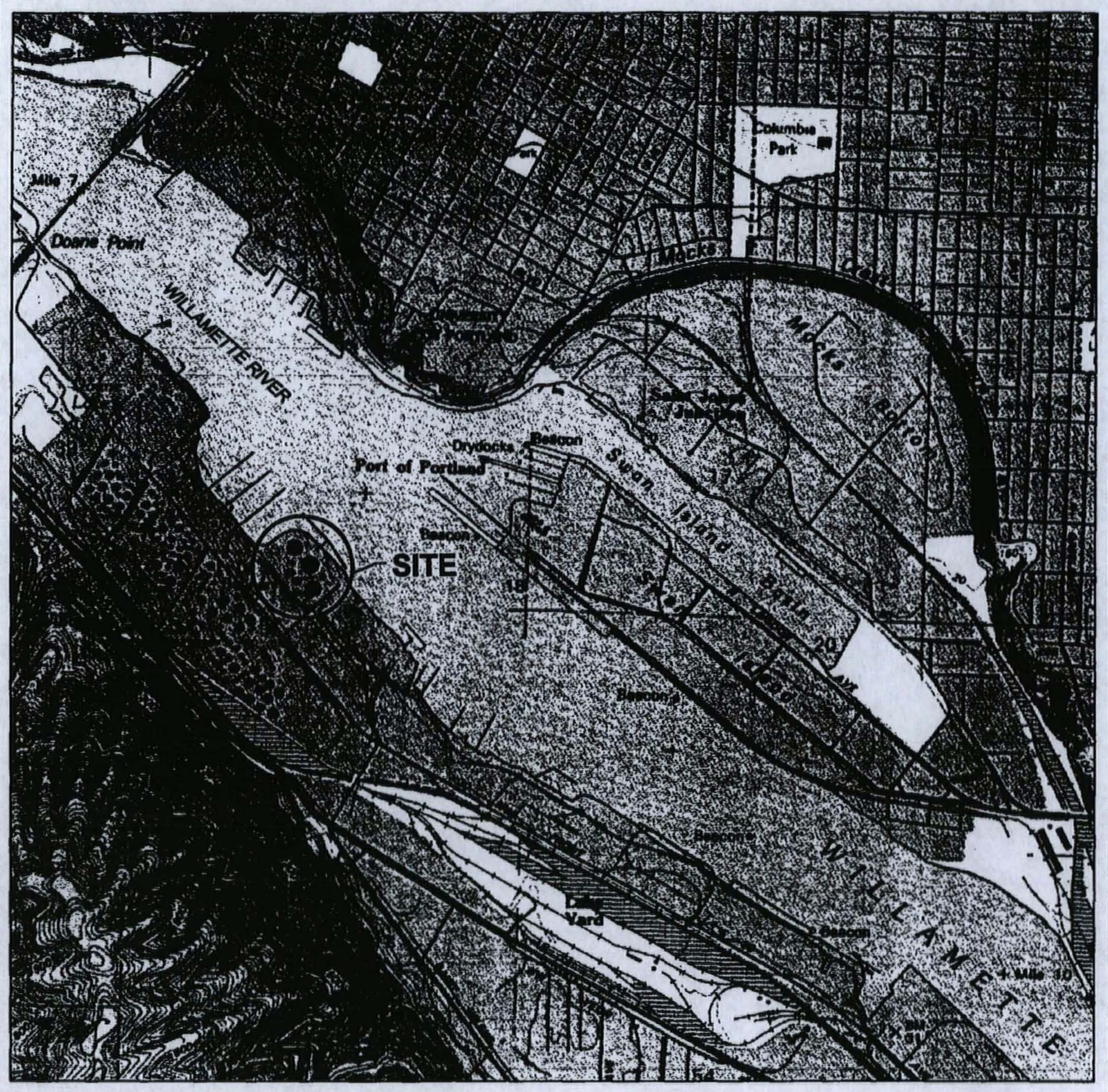
Sample Designation Matrix Date Sampled	S-1 Sediment 12/15/00	S-2 Sediment 12/15/00	S-3 Sediment 12/15/00	S-3 Sediment 11/04/04	S-3 Sediment 05/02/07	S3-01C Sediment 12/15/00
				LPAHs		
Naphthalene	200 JD	50 JD	400 JD	64 JD	130	12 U
Acenaphthylene	40 JD	20 JD	60 JD	37 JU	31	12 U
Acenaphthene	200 JD	30 JD	720 U	26 JU	24	12 U
Fluorene	100 JD	20 JD	3600 D	72 JD	47	12 U
Phenanthrene	1500 D	320 D	3600 D	660 JD	670	12 U
Anthracene	400 JD	50 JD	2600 D	140 JD	58	12 U
2-Methylnaphthalene	100 JD	50 JD	400 JD	31 JU	80	0.6 J
Total LPAH	2540	540	10660	936	1040	0.6
				HPAHs		
Fluoranthene	2600 D	690 D	5800 D	1400 JD	780	3 J
Pyrene	2600 D	770 D	5500 D	1200 JD	1000	3 J
Benz(a)anthracene	1300 D	440 D	2500 D	400 JD	230	2 J
Chrysene	2000 D	740 D	5300 D	1100 JD	390	3 J
Benzo(b)fluoranthene	2000 D	780 D	4100 D	1100 JD	570	3 J
Benzo(k)fluoranthene	1500 D	540 D	3400 D	270 JD	180	2 J
Benzo(a)pyrene	1900 D	670 D	3700 D	490 JD	320	2 J
Indeno(1,2,3-cd)pyrene	1500 D	490 D	3200 D	530 JD	500	2 J
Dibenz(a,h)anthracene	300 JD	100 JD	800 JD	150 JD	100	24 U
Benzo(g,h,i)perylene	1600 D	500 D	3600 D	790 JD	1100	3 J
Total HPAHs	17300	5720	37900	7430	5170	23
				SVOCs		
3- and 4-Methylphenol Coelution	13000 U	1900 U	4000 JD	3000 JD	680 U	240 U
Dibenzofuran	100 JD	20 JD	200 JD	69 JD	67	12 U
Dimethyl Phthalate					680 U	
Diethyl Phthalate					680 U	
Di-n-butyl Phthalate					840 D	
Butyl Benzyl Phthalate	1500 D	2500 D	5000 D	930 JD	680 U	1 J
Bis(2-ethylhexyl) Phthalate					12000 D	
Di-n-octyl Phthalate	13000 U	1900 U	14000 U	11000 JD	680 U	2 J
				PCBs		
Arochor 1016					11 U	
Arochor 1221					22 U	
Arochor 1232					11 U	
Arochor 1242					11 U	
Arochor 1248					11 U	
Arochor 1254					69	
Arochor 1260					75	

NOTE: µg/kg = micrograms per kilogram or part per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

Table 6
Metals
Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location		Matrix	Date Sampled	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Nickel	Silver	Zinc
Catch Basins - Sediment µg/kg (ppb)													
S-1	Total	Sediment	12/15/00	5200	2000	48900	137000	145000					638000
S-2	Total	Sediment	12/15/00	7500	1420	63700	316000	211000					584000
S-3	Total	Sediment	12/15/00	37900	2860	144000	1050000	454000					985000
S-3	Total	Sediment	11/04/04	25600	1900	189000	1360000	600000					752000
S-3	Total	Sediment	05/02/07	10000	1600	79100	321000	206000	462000	240	44400	920	938000
S3-01C	Total	Sediment	12/15/00	4400	120	11900	27400	8580					82700

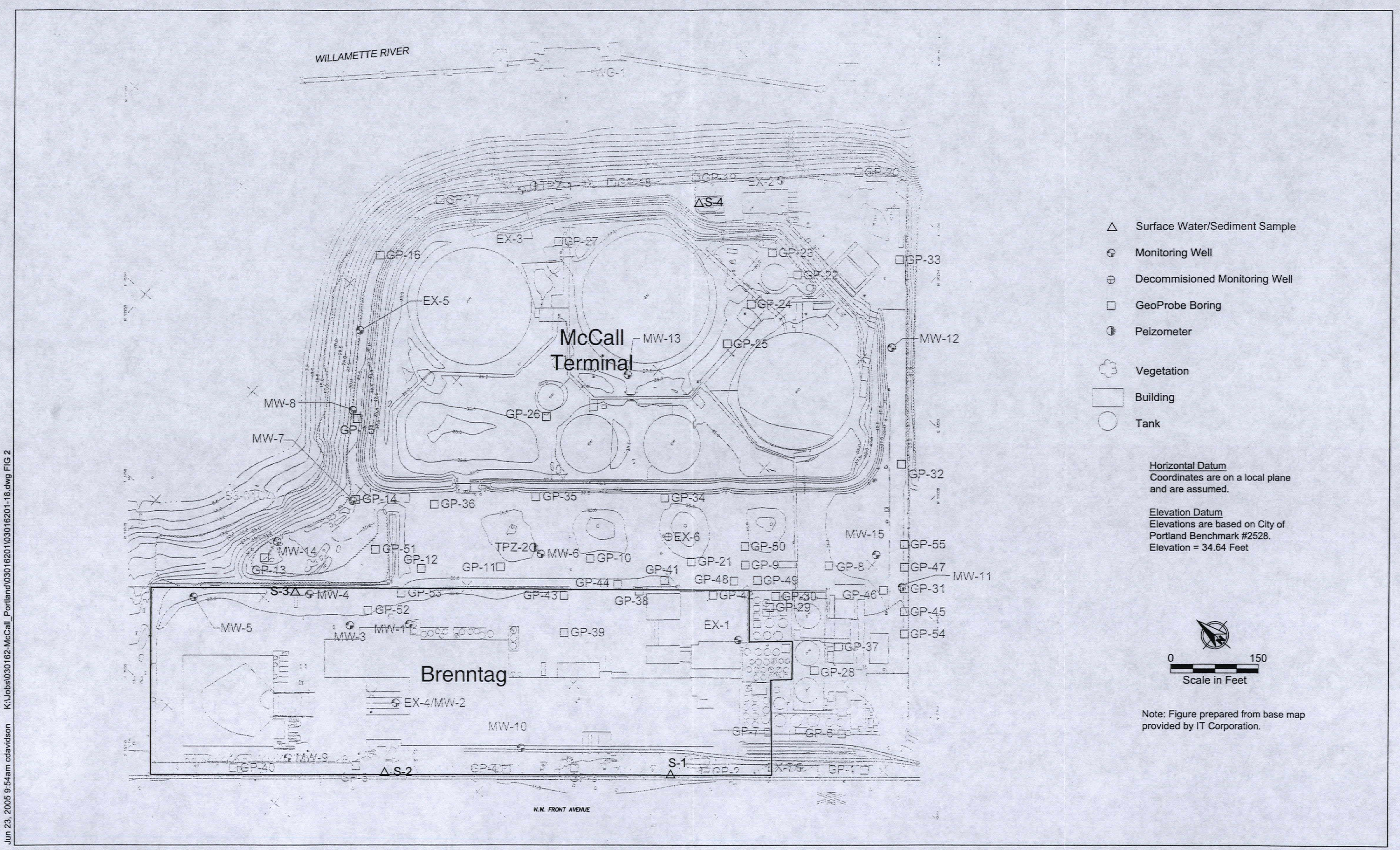
Note: U = not detected at method reporting limit. µg/kg = micrograms per kilogram. ppb = parts per billion.



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical



Jun 23, 2005 9:54am cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-18.dwg FIG 2

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Stormwater Sample Location Map
McCall Oil and Chemical

Attachment A
Laboratory Report

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

June 6, 2007 Analytical Report for Service Request No: K0703836

John Renda
Anchor Environmental
6650 SW Redwood Lane
Suite 110
Portland, OR 97224

RE: McCall-Portland

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on May 04, 2007. For your reference, these analyses have been assigned our service request number K0703836.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@kelso.caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/lb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- \+ The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Anchor Environmental	**Service Request No.:**	K0703836
Project:	McCall-Portland	**Date Received:**	5/4/07
Sample Matrix:	Water, Sediment		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Four water and one sediment sample were received for analysis at Columbia Analytical Services on 5/4/07. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Zinc for sample S-2-050207 is not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The control criteria for matrix spike recoveries of Copper, Manganese, and Zinc for sample SS-3-050207 are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Diesel Range Organics

No anomalies associated with the analysis of these samples were observed.

Gasoline Range Organics

No anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

No anomalies associated with the analysis of these samples were observed.

Approved by ___LAH___ Date 6/6/07

Semivolatile Organic Compounds by EPA Method 8270C

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL6239: Hexachlorocyclopentadiene, Diethyl Phthalate, Benzidine. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 4.9%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL6280: Benzoic Acid, 2,4-Dinitrophenol, Benzidine. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 5.1%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

Surrogate and Matrix Spike Exceptions:
The control criteria for the surrogates in samples SS-3-050207 and Batch QC are not applicable. The analysis of the sample required dilutions, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

The control criteria for the following surrogate in the Batch QC sample Matrix Spikes are not applicable: Terphenyl-d14. The analysis of the samples required dilutions, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Butyl Benzyl Phthalate for sample Batch QC are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The matrix spike recoveries of most analytes for sample Batch QC were outside control criteria because of suspected matrix interference. A Matrix Spike Duplicate (MSD) was also analyzed, but produced similar results. The results of the original analysis are reported. All recoveries in the associated replicate Laboratory Control Samples (LCS/DLCS) were within control limits, indicating the analytical batch was in control. No further corrective action was appropriate.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate matrix spike analyses of Dimethyl Phthalate and Bis(2-ethylhexyl) Phthalate in sample Batch QC was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Elevated Method Reporting Limits:
The reporting limits are elevated for sample SS-3-050207. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. Clean-up of the extract was performed within the scope of the method, but did not eliminate enough of the background components to prevent dilution. A semi-quantitative screen was performed prior to final analysis. The results of the screening indicated the need to perform a dilution.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

Elevated Method Reporting Limits:
The reporting limit is elevated for Acenaphthylene in sample S-3-050207. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the reporting limit. The result is flagged to indicate the matrix interference.

Approved by ________ LGA **Date** 6/16/07

The reporting limit is elevated for Naphthalene, Dibenzofuran, and Phenanthrene in sample S-4-050207. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the reporting limit. The results are flagged to indicate the matrix interference.

Approved by ________________________ LMA **Date** 6/6/07

Chain of Custody Documentation

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: K0703836

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC #

PROJECT NAME McCall - PORTLAND
PROJECT NUMBER
PROJECT MANAGER JOHN RENDA
COMPANY/ADDRESS ANCHOR ENV - PDX
CITY/STATE/ZIP
E-MAIL ADDRESS
PHONE # 503-670-1108 x 12 FAX# 670-1128
SAMPLER'S SIGNATURE

Analyses: Number of Containers; Semivolatile Organics by GC/MS 625 8270 8270LL; Volatile Organics 624 8260; Hydrocarbons (see below) Gas Diesel Oil; Fuel Fingerprint (FIQ); NW-HCID Screen; Oil & Grease/TRPH 1664 HEM 1664 SGT; PCB's Aroclors; Pesticides/Herbicides 608 8081A 8141A 8151A; Chlorophenolics - 8151M Tri Tetra PCP; PAHS 8310 SIM *; Metals, Total or Dissolved (See list below) ICP/MS; Cyanide; Hex-Chrom; pH, Cond, Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle); NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3; TOX 9020; AOX 1650; 506; Phthalates

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics	Volatile Organics	Hydrocarbons	Fuel Fingerprint	NW-HCID	Oil & Grease	PCB's	Pesticides/Herbicides	Chlorophenolics	PAHS	Metals	Cyanide	pH, Cond…	NH3-N, COD… TOC	TOX	AOX	Phthalates			REMARKS
S-2-050207	5-2-07	1445		W	10			X			X				X		X					X			
S-3-050207	↓	1500		W	10			X			X				X		X					X			
S-4-050207	↓	1630		W	10			X			X				X		X					X			
SS-3-050207	↓	1525		S	3			X			X				X			X				X			
TRIP BLANK	5-2-07	NA		W	2																				HOLD

REPORT REQUIREMENTS
___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION
P.O. # ______
Bill To: ______

TURNAROUND REQUIREMENTS
___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:
Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg
Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:
* SIM PAHs By 8270 LL + 4-METHYLPHENOL, Butylbenzylphthalate, Di-N-OCTYLphthalate, and DIBENZOfuran

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 5-3-07/2000	Signature: Tracy Abel Date/Time: 5/4/07 1705	Signature Date/Time	Signature Date/Time
Printed Name: TIM STONE Firm: ANCHOR-PDX	Printed Name: [illegible] Firm: CAS	Printed Name Firm	Printed Name Firm

00010

PC Cynda

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client / Project: Anchor Service Request K07 03836

Received: 5/4/07 Opened: 5/4/07 By: TBah

1. Samples were received via? US Mail Fed Ex UPS DHL GH GS PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other ______ NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Is shipper's air-bill filed? If not, record air-bill number: ______ NA Y N
5. Temperature of cooler(s) upon receipt (°C): 2.0 3.2 1.0
   Temperature Blank (°C): 1.9 2.6 2.2
6. If applicable, list Chain of Custody Numbers:
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Packing material used. Inserts Bubble Wrap Gel Packs Wet Ice Sleeves Other ______
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* Y N
10. Were all bottle labels complete (i.e analysis, preservation, etc.)? Y N
11. Did all bottle labels and tags agree with custody papers? *Indicate in the table below* Y N
12. Were the correct types of bottles used for the tests indicated? Y N
13. Were all of the preserved bottles received at the lab with the appropriate pH? *Indicate in the table below* NA Y N
14. Were VOA vials and 1631 Mercury bottles checked for absence of air bubbles? *Indicate in the table below.* NA Y N
15. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection? NA Y N
16. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

Additional Notes, Discrepancies, & Resolutions:

00011

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland		
Sample Matrix:	Sediment		

Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
SS-3-050207	K0703836-004	05/02/2007	05/04/2007	05/07/2007	37.1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Sediment	**Date Received:**	05/04/2007
		Date Analyzed:	05/07/2007

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
SS-3-050207	K0703836-004	37.1	35.8	36.5	4	

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	Anchor Environmental	**Service Request :**	K0703836
Project Name :	McCall-Portland	**Date Collected :**	05/02/07
Project Number :	NA	**Date Received :**	05/04/07
Sample Matrix :	Sediment		

Carbon, Total Organic

Units : Percent
Basis : Dry

Analysis Method : ASTM D4129-82M
Test Notes :

Sample Name	**Lab Code**	**MRL**	**Dilution Factor**	**Date Analyzed**	**Result**	**Result Notes**
SS-3-050207	K0703836-004	0.05	1	05/08/07	19.3	
Method Blank	K0703836-MB	0.05	1	05/08/07	ND	

M Modified

Report By:CSKILLERN

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Anchor Environmental	**Service Request :**	K0703836
Project Name :	McCall-Portland	**Date Collected :**	NA
Project Number :	NA	**Date Received :**	NA
Sample Matrix :	Sediment	**Date Prepared :**	NA
		Date Analyzed :	05/08/07

Duplicate Summary
Inorganic Parameters

Sample Name :	Batch QC	Units :	Percent
Lab Code :	K0703604-003DUP	Basis :	Dry
Test Notes :			

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	ASTM D4129-82M	0.05	1.49	1.33	1.41	11	

M Modified

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Anchor Environmental	**Service Request :**	K0703836
Project Name :	McCall-Portland	**Date Collected :**	NA
Project Number :	NA	**Date Received :**	NA
Sample Matrix :	Sediment	**Date Prepared :**	NA
		Date Analyzed :	05/08/07

Matrix Spike Summary
Inorganic Parameters

Sample Name :	Batch QC	Units :	Percent
Lab Code :	K0703604-003MS	Basis :	Dry
Test Notes :			

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	ASTM D4129-82M	0.05	7.96	1.49	8.98	94	75-114	

M Modified

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Anchor Environmental	**Service Request :**	K0703836
Project Name :	McCall-Portland	**Date Collected :**	NA
Project Number :	NA	**Date Received :**	NA
Sample Matrix :	Sediment	**Date Prepared :**	NA
		Date Analyzed :	05/08/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	Percent
Lab Code :	K0703836-LCS	Basis :	Dry
Test Notes :			

Analyte	**Prep Method**	**Analysis Method**	**True Value**	**Result**	**Percent Recovery**	**CAS Percent Recovery Acceptance Limits**	**Result Notes**
Carbon, Total Organic	NONE	ASTM D4129-82M	0.89	0.79	89	74-123	

M Modified

port By:CSKILLERN

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	Anchor Environmental	**Service Request :**	K0703836
Project Name :	McCall-Portland	**Date Collected :**	05/02/07
Project Number :	NA	**Date Received :**	05/04/07
Sample Matrix :	Water		

Solids, Total Suspended (TSS)

Units : mg/L
Basis : NA

Analysis Method : 160.2
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
S-2-050207	K0703836-001	5	1	05/08/07	19	
S-3-050207	K0703836-002	5	1	05/08/07	17	
S-4-050207	K0703836-003	5	1	05/08/07	238	
Method Blank	K0703836-MB	5	1	05/08/07	ND	

Report By: CSKILLERN

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Anchor Environmental
Project Name : McCall-Portland
Project Number : NA
Sample Matrix : Water

Service Request : K0703836
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/08/07

Duplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0703795-002DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	**Analysis Method**	**MRL**	**Sample Result**	**Duplicate Sample Result**	**Average**	**Relative Percent Difference**	**Result Notes**
Solids, Total Suspended (TSS)	160.2	5	ND	ND	ND	-	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Anchor Environmental
Project Name : McCall-Portland
Project Number : NA
Sample Matrix : Water

Service Request : K0703836
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/08/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703836-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Solids, Total Suspended (TSS)	NONE	160.2	226	206	91	85-115	

Report By: CSKILLERN

Metals

METALS

- Cover Page -

INORGANIC ANALYSIS DATA PACKAGE

Client: Anchor Environmental Service Request: K0703836

Project No.:

Project Name: McCall-Portland

Sample No.	Lab Sample ID.
S-2-050207	K0703836-001
S-2-050207 DISS	K0703836-001 DISS
S-2-050207D	K0703836-001D
S-2-050207S	K0703836-001S
S-3-050207	K0703836-002
S-3-050207 DISS	K0703836-002 DISS
S-4-050207	K0703836-003
S-4-050207 DISS	K0703836-003 DISS
Method Blank	K0703836-MB
Batch QCD	K0703963-004D
Batch QCS	K0703963-004S

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: [signature] Date: 6/4/07

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: NA
Project Name: McCall-Portland
Matrix: WATER

Service Request: K0703836
Date Collected: 05/02/07
Date Received: 05/04/07
Units: µG/L
Basis: NA

Sample Name: S-2-050207 Lab Code: K0703836-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	0.5	U	
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.12		
Chromium	200.8	0.2	1	5/24/07	5/31/07	1.1		
Copper	200.8	0.1	1	5/24/07	5/31/07	11.3		
Lead	200.8	0.02	1	5/24/07	5/31/07	3.20		
Manganese	200.8	0.05	1	5/24/07	5/31/07	8.36		
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	1.2		
Silver	200.8	0.02	1	5/24/07	5/31/07	0.02		
Zinc	200.8	0.5	1	5/24/07	5/31/07	149		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:	NA	Date Collected:	05/02/07
Project Name:	McCall-Portland	Date Received:	05/04/07
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: S-2-050207 DISS　　Lab Code: K0703836-001 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	0.5	U	
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.05		
Chromium	200.8	0.2	1	5/24/07	5/31/07	0.7		
Copper	200.8	0.1	1	5/24/07	5/31/07	8.8		
Lead	200.8	0.02	1	5/24/07	5/31/07	0.86		
Manganese	200.8	0.05	1	5/24/07	5/31/07	3.25		
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	1.2		
Silver	200.8	0.02	1	5/24/07	5/31/07	0.02	U	
Zinc	200.8	0.5	1	5/24/07	5/31/07	101		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: NA
Project Name: McCall-Portland
Matrix: WATER

Service Request: K0703836
Date Collected: 05/02/07
Date Received: 05/04/07
Units: µG/L
Basis: NA

Sample Name: S-3-050207 Lab Code: K0703836-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	0.5	U	
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.17		
Chromium	200.8	0.2	1	5/24/07	5/31/07	2.3		
Copper	200.8	0.1	1	5/24/07	5/31/07	19.1		
Lead	200.8	0.02	1	5/24/07	5/31/07	4.85		
Manganese	200.8	0.05	1	5/24/07	5/31/07	23.5		
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	2.7		
Silver	200.8	0.02	1	5/24/07	5/31/07	0.07		
Zinc	200.8	0.5	1	5/24/07	5/31/07	375		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:	NA	Date Collected:	05/02/07
Project Name:	McCall-Portland	Date Received:	05/04/07
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: S-3-050207 DISS Lab Code: K0703836-002 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	0.5	U	
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.15		
Chromium	200.8	0.2	1	5/24/07	5/31/07	0.9		
Copper	200.8	0.1	1	5/24/07	5/31/07	12.8		
Lead	200.8	0.02	1	5/24/07	5/31/07	0.75		
Manganese	200.8	0.05	1	5/24/07	5/31/07	14.3		
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	1.9		
Silver	200.8	0.02	1	5/24/07	5/31/07	0.03		
Zinc	200.8	0.5	1	5/24/07	5/31/07	301		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:	NA	Date Collected:	05/02/07
Project Name:	McCall-Portland	Date Received:	05/04/07
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: S-4-050207 Lab Code: K0703836-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	1.5		
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.51		
Chromium	200.8	0.2	1	5/24/07	5/31/07	5.2		
Copper	200.8	0.1	1	5/24/07	5/31/07	27.7		
Lead	200.8	0.02	1	5/24/07	5/31/07	36.0		
Manganese	200.8	0.05	1	5/24/07	5/31/07	169		
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	6.9		
Silver	200.8	0.02	1	5/24/07	5/31/07	0.12		
Zinc	200.8	0.5	1	5/24/07	5/31/07	252		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:	NA	Date Collected:	05/02/07
Project Name:	McCall-Portland	Date Received:	05/04/07
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: S-4-050207 DISS   Lab Code: K0703836-003 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	0.5	U	
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.16		
Chromium	200.8	0.2	1	5/24/07	5/31/07	0.5		
Copper	200.8	0.1	1	5/24/07	5/31/07	14.2		
Lead	200.8	0.02	1	5/24/07	5/31/07	0.54		
Manganese	200.8	0.05	1	5/24/07	5/31/07	46.3		
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	2.8		
Silver	200.8	0.02	1	5/24/07	5/31/07	0.02	U	
Zinc	200.8	0.5	1	5/24/07	5/31/07	201		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: NA
Project Name: McCall-Portland
Matrix: WATER

Service Request: K0703836
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank
Lab Code: K0703836-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	5/24/07	5/31/07	0.5	U	
Cadmium	200.8	0.02	1	5/24/07	5/31/07	0.02	U	
Chromium	200.8	0.2	1	5/24/07	5/31/07	0.2	U	
Copper	200.8	0.1	1	5/24/07	5/31/07	0.1	U	
Lead	200.8	0.02	1	5/24/07	5/31/07	0.02	U	
Manganese	200.8	0.05	1	5/24/07	5/31/07	0.05	U	
Mercury	7470A	0.2	1	5/24/07	5/25/07	0.2	U	
Nickel	200.8	0.2	1	5/24/07	5/31/07	0.2	U	
Silver	200.8	0.02	1	5/24/07	5/31/07	0.02	U	
Zinc	200.8	0.5	1	5/24/07	5/31/07	0.5	U	

% Solids: 0.0

Comments:

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:		Units:	µg/L
Project Name:	McCall-Portland	Basis:	NA
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCS Lab Code: K0703963-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	79 - 118	1.1		0.2	U	1.0	109		7470A

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS

-5a-

SPIKE SAMPLE RECOVERY

Client: Anchor Environmental

Project No.:

Project Name: McCall-Portland

Matrix: WATER

Service Request: K0703836

Units: µg/L

Basis: NA

% Solids: 0.0

Sample Name: S-2-050207S

Lab Code: K0703836-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	21.4		0.5	U	20.0	107		200.8
Cadmium	70 - 130	21.1		0.12		20.0	105		200.8
Chromium	70 - 130	23.2		1.1		20.0	110		200.8
Copper	70 - 130	33.6		11.3		20.0	112		200.8
Lead	70 - 130	25.2		3.20		20.0	110		200.8
Manganese	70 - 130	31.2		8.36		20.0	114		200.8
Nickel	70 - 130	22.7		1.2		20.0	107		200.8
Silver	70 - 130	21.1		0.02		20.0	105		200.8
Zinc		176		149		20.0	135		200.8

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
-6-
DUPLICATES

Client: Anchor Environmental
Project No.:
Project Name: McCall-Portland
Matrix: WATER

Service Request: K0703836
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: Batch QCD
Lab Code: K0703963-004D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.2	U	0.2	U			7470A

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
- 6 -
DUPLICATES

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:		Units:	µg/L
Project Name:	McCall-Portland	Basis:	NA
Matrix:	WATER	% Solids:	0.0

Sample Name: S-2-050207D   Lab Code: K0703836-001D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		0.5	U	0.5	U			200.8
Cadmium	20	0.12		0.11		7		200.8
Chromium	20	1.1		1.2		4		200.8
Copper	20	11.3		11.3		0		200.8
Lead	20	3.20		3.15		2		200.8
Manganese	20	8.36		8.65		3		200.8
Nickel	20	1.2		1.2		2		200.8
Silver		0.02		0.02		4		200.8
Zinc	20	149		151		1		200.8

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: Anchor Environmental   Service Request: K0703836

Project No.:

Project Name: McCall-Portland

Aqueous LCS Source: Inorganic Ventures   Solid LCS Source:

	Aqueous ug/L			Solid (mg/kg)					
Analyte	True	Found	%R	True	Found	C	Limits (%)		%R
Arsenic	20.0	19.5	98						
Cadmium	20.0	19.9	100						
Chromium	20.0	20.4	102						
Copper	20.0	19.2	96						
Lead	20.0	20.2	101						
Manganese	20.0	19.3	96						
Mercury	5.00	5.20	104						
Nickel	20.0	18.7	94						
Silver	20.0	18.7	94						
Zinc	20.0	20.4	102						

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Anchor Environmental

Service Request: K0703836

Project No.:

Project Name: McCall-Portland

Sample No.	Lab Sample ID.
Batch QCD	K0703793-012D
Batch QCS	K0703793-012S
SS-3-050207	K0703836-004
SS-3-050207D	K0703836-004D
SS-3-050207S	K0703836-004S
Method Blank	K0703836-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: [signature]

Date: 6/4/07

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: NA
Project Name: McCall-Portland
Matrix: SEDIMENT

Service Request: K0703836
Date Collected: 05/02/07
Date Received: 05/04/07
Units: MG/KG
Basis: Dry

Sample Name: SS-3-050207   Lab Code: K0703836-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.5	5	5/25/07	6/1/07	10.0		
Cadmium	6020	0.05	5	5/25/07	6/1/07	1.60		
Chromium	6020	1.0	25	5/25/07	6/1/07	79.1		
Copper	6020	0.5	25	5/25/07	6/1/07	321		
Lead	6020	0.25	25	5/25/07	6/1/07	206		
Manganese	6020	0.25	25	5/25/07	6/1/07	462		
Mercury	7471A	0.02	1	5/30/07	5/30/07	0.24		
Nickel	6020	1.0	25	5/25/07	6/1/07	44.4		
Silver	6020	0.02	5	5/30/07	6/1/07	0.92		
Zinc	6020	2.5	25	5/25/07	6/1/07	938		

% Solids: 37.1

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:	NA	Date Collected:	
Project Name:	McCall-Portland	Date Received:	
Matrix:	SEDIMENT	Units:	MG/KG
		Basis:	Dry

Sample Name: Method Blank   Lab Code: K0703836-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.5	5	5/25/07	6/1/07	0.5	U	
Cadmium	6020	0.05	5	5/25/07	6/1/07	0.02	U	
Chromium	6020	0.2	5	5/25/07	6/1/07	0.2	U	
Copper	6020	0.1	5	5/25/07	6/1/07	0.1	U	
Lead	6020	0.05	5	5/25/07	6/1/07	0.05	U	
Manganese	6020	0.05	5	5/25/07	6/1/07	0.05	U	
Mercury	7471A	0.02	1	5/30/07	5/30/07	0.02	U	
Nickel	6020	0.2	5	5/25/07	6/1/07	0.2	U	
Silver	6020	0.02	5	5/30/07	6/1/07	0.02	U	
Zinc	6020	0.5	5	5/25/07	6/1/07	0.5	U	

% Solids: 100.0

Comments:

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: Anchor Environmental

Service Request: K0703836

Project No.:

Units: mg/kg

Project Name: McCall-Portland

Basis: Dry

Matrix: SEDIMENT

% Solids: 31.2

Sample Name: Batch QCS

Lab Code: K0703793-012S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	60 - 123	1.32		1.00		0.48	67		7471A

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS

- 5a -

SPIKE SAMPLE RECOVERY

Client:	Anchor Environmental	Service Request:	K0703836
Project No.:		Units:	mg/kg
Project Name:	McCall-Portland	Basis:	Dry
Matrix:	SEDIMENT	% Solids:	37.1

Sample Name: SS-3-050207S Lab Code: K0703836-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	61 - 128	107		10.0		99.1	98		6020
Cadmium	79 - 127	10.9		1.60		9.91	94		6020
Chromium	48 - 151	119		79.1		39.6	101		6020
Copper		327		321		49.5	14		6020
Lead	51 - 155	290		206		99.1	85		6020
Manganese		532		462		99.1	71		6020
Nickel	80 - 114	146		44.4		99.1	103		6020
Silver	72 - 121	9.76		0.92		9.95	89		6020
Zinc		926		938		99.1	-12		6020

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
-6-
DUPLICATES

Client:	Anchor Environmental	**Service Request:**	K0703836
Project No.:		**Units:**	mg/kg
Project Name:	McCall-Portland	**Basis:**	Dry
Matrix:	SEDIMENT	**% Solids:**	31.2

Sample Name: Batch QCD **Lab Code:** K0703793-012D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	30	1.00		0.85		16		7471A

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS
- 6 -
DUPLICATES

Client: Anchor Environmental
Project No.:
Project Name: McCall-Portland
Matrix: SEDIMENT

Service Request: K0703836
Units: mg/kg
Basis: Dry
% Solids: 37.1

Sample Name: SS-3-050207D   Lab Code: K0703836-004D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	10.0		9.6		4		6020
Cadmium	30	1.60		1.35		17		6020
Chromium	30	79.1		73.4		7		6020
Copper	30	321		291		9		6020
Lead	30	206		183		12		6020
Manganese	30	462		455		2		6020
Nickel	30	44.4		45.8		3		6020
Silver	30	0.92		0.81		13		6020
Zinc	30	938		862		8		6020

An empty field in the Control Limit column indicates the control limit is not applicabl

METALS

-7-

LABORATORY CONTROL SAMPLE

Client: Anchor Environmental

Service Request: K0703836

Project No.:

Project Name: McCall-Portland

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source: ERA Lot #D045540

Analyte	Aqueous mg/L True	Aqueous mg/L Found	Aqueous mg/L %R	Solid (mg/kg) True	Solid (mg/kg) Found	C	Limits (%)		%R
Arsenic				146	125		80.0	115	86
Cadmium				92.8	86.2		79.0	127	93
Chromium				172	165		77.0	127	96
Copper				67.0	65.6		80.0	128	98
Lead				67.5	68.5		81.0	129	101
Manganese				196	188		80.0	120	96
Mercury				1.77	1.67		75.0	118	94
Nickel				80.0	80.1		83.0	131	100
Silver				93.0	101		76.0	128	109
Zinc				380	348		77.0	139	92

NWTPH-Dx

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Diesel and Residual Range Organics

Sample Name:	S-2-050207	**Units:**	ug/L
Lab Code:	K0703836-001	**Basis:**	NA
Extraction Method:	EPA 3510B	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	250	1	05/08/07	05/10/07	KWG0705416	
Residual Range Organics (RRO)	ND	U	500	1	05/08/07	05/10/07	KWG0705416	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	92	50-150	05/10/07	Acceptable
n-Triacontane	97	50-150	05/10/07	Acceptable

Comments:

Analytical Results

Client:	Anchor Environmental		**Service Request:**	K0703836
Project:	McCall-Portland		**Date Collected:**	05/02/2007
Sample Matrix:	Water		**Date Received:**	05/04/2007

Diesel and Residual Range Organics

Sample Name:	S-3-050207		**Units:**	ug/L
Lab Code:	K0703836-002		**Basis:**	NA
Extraction Method:	EPA 3510B		**Level:**	Low
Analysis Method:	NWTPH-Dx			

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**290**	Z	250	1	05/08/07	05/10/07	KWG0705416	
Residual Range Organics (RRO)	ND	U	500	1	05/08/07	05/10/07	KWG0705416	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	82	50-150	05/10/07	Acceptable
n-Triacontane	86	50-150	05/10/07	Acceptable

Comments:

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Diesel and Residual Range Organics

Sample Name:	S-4-050207	**Units:**	ug/L
Lab Code:	K0703836-003	**Basis:**	NA
Extraction Method:	EPA 3510B	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	1000	Z	250	1	05/08/07	05/10/07	KWG0705416	
Residual Range Organics (RRO)	940	Z	500	1	05/08/07	05/10/07	KWG0705416	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	81	50-150	05/10/07	Acceptable
n-Triacontane	88	50-150	05/10/07	Acceptable

Comments:

00047

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Diesel and Residual Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0705416-3	**Basis:**	NA
Extraction Method:	EPA 3510B	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	250	1	05/08/07	05/10/07	KWG0705416	
Residual Range Organics (RRO)	ND	U	500	1	05/08/07	05/10/07	KWG0705416	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	94	50-150	05/10/07	Acceptable
n-Triacontane	99	50-150	05/10/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Water

Service Request: K0703836

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3510B
Analysis Method: NWTPH-Dx

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2
S-2-050207	K0703836-001	92	97
S-3-050207	K0703836-002	82	86
S-4-050207	K0703836-003	81	88
Method Blank	KWG0705416-3	94	99
Lab Control Sample	KWG0705416-1	106	106
Duplicate Lab Control Sample	KWG0705416-2	105	55

Surrogate Recovery Control Limits (%)

Sur1 = o-Terphenyl	50-150
Sur2 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

00049

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/08/2007
Sample Matrix:	Water	**Date Analyzed:**	05/10/2007

Lab Control Spike/Duplicate Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method:	EPA 3510B	**Units:**	ug/L
Analysis Method:	NWTPH-Dx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0705416

	Lab Control Sample KWG0705416-1 **Lab Control Spike**			Duplicate Lab Control Sample KWG0705416-2 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	1530	1600	96	1580	1600	99	56-162	3	30
Residual Range Organics (RRO)	715	800	89	810	800	101	53-143	12	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00050

Gasoline Range Organics

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Gasoline Range Organics

Sample Name:	S-2-050207	**Units:**	ug/L
Lab Code:	K0703836-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	05/11/07	05/11/07	KWG0705592	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	91	50-150	05/11/07	Acceptable

Comments:

00052

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Gasoline Range Organics

Sample Name:	S-3-050207	**Units:**	ug/L
Lab Code:	K0703836-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	05/11/07	05/11/07	KWG0705592	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	90	50-150	05/11/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Gasoline Range Organics

Sample Name:	S-4-050207	**Units:**	ug/L
Lab Code:	K0703836-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	05/11/07	05/11/07	KWG0705592	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	90	50-150	05/11/07	Acceptable

Comments:

00054

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0705592-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	05/11/07	05/11/07	KWG0705592	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	94	50-150	05/11/07	Acceptable

Comments:

00055

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Sediment	**Date Received:**	05/04/2007

Gasoline Range Organics

Sample Name:	SS-3-050207	**Units:**	mg/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	14	1	05/11/07	05/12/07	KWG0705541	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	75	50-150	05/12/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG0705541-5	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	5.0	1	05/11/07	05/12/07	KWG0705541	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	103	50-150	05/12/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Water

Service Request: K0703836

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
S-2-050207	K0703836-001	91
S-3-050207	K0703836-002	90
S-4-050207	K0703836-003	90
S-2-050207DUP	KWG0705592-1	91
Method Blank	KWG0705592-4	94
Lab Control Sample	KWG0705592-2	99
Duplicate Lab Control Sample	KWG0705592-3	99

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene 50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Sediment

Service Request: K0703836

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5035/5030B
Analysis Method: NWTPH-Gx

Units: PERCENT
Level: Med

Sample Name	Lab Code	Sur1
SS-3-050207	K0703836-004	75
SS-3-050207DUP	KWG0705541-3	77
Method Blank	KWG0705541-5	103
Lab Control Sample	KWG0705541-4	109

Surrogate Recovery Control Limits (%)

Sur1 =	4-Bromofluorobenzene	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

00059

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/11/2007
Sample Matrix:	Water	**Date Analyzed:**	05/11/2007

Duplicate Sample Summary
Gasoline Range Organics

Sample Name:	S-2-050207	**Units:**	ug/L
Lab Code:	K0703836-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx	**Extraction Lot:**	KWG0705592

Analyte Name	MRL	Sample Result	S-2-050207DUP KWG0705592-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Gasoline Range Organics-NWTPH	250	ND	ND	ND	-	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00060

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/11/2007
Sample Matrix:	Sediment	**Date Analyzed:**	05/12/2007

Duplicate Sample Summary
Gasoline Range Organics

Sample Name:	SS-3-050207	**Units:**	mg/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 5035/5030B	**Level:**	Med
Analysis Method:	NWTPH-Gx	**Extraction Lot:**	KWG0705541

			SS-3-050207DUP KWG0705541-3 Duplicate Sample			
Analyte Name	**MRL**	**Sample Result**	**Result**	**Average**	**Relative Percent Difference**	**RPD Limit**
Gasoline Range Organics-NWTPH	14	ND	ND	ND	-	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/11/2007
Sample Matrix:	Water	**Date Analyzed:**	05/11/2007

Lab Control Spike/Duplicate Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	NWTPH-Gx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0705592

	Lab Control Sample KWG0705592-2 **Lab Control Spike**			Duplicate Lab Control Sample KWG0705592-3 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Gasoline Range Organics-NWTPH	478	500	96	488	500	98	61-132	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/11/2007
Sample Matrix:	Soil	**Date Analyzed:**	05/12/2007

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5035/5030B	**Units:**	mg/Kg
Analysis Method:	NWTPH-Gx	**Basis:**	Dry
		Level:	Med
		Extraction Lot:	KWG0705541

	Lab Control Sample KWG0705541-4 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Gasoline Range Organics-NWTPH	48.6	50.0	97	63-116

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00063

Polychlorinated Biphenyls
PCB's
EPA Method 8082

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Polychlorinated Biphenyls (PCBs)

Sample Name:	S-2-050207	**Units:**	ug/L
Lab Code:	K0703836-001	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1221	ND	U	0.39	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1232	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1242	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1248	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1254	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1260	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	27-121	05/11/07	Acceptable

Comments:

00065

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Polychlorinated Biphenyls (PCBs)

Sample Name:	S-3-050207	**Units:**	ug/L
Lab Code:	K0703836-002	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1221	ND	U	0.39	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1232	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1242	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1248	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1254	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1260	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	27-121	05/11/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Polychlorinated Biphenyls (PCBs)

Sample Name:	S-4-050207	**Units:**	ug/L
Lab Code:	K0703836-003	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1221	ND	U	0.39	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1232	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1242	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1248	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1254	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	
Aroclor 1260	ND	U	0.20	1	05/08/07	05/11/07	KWG0705419	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	67	27-121	05/11/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0705419-4	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	1	05/08/07	05/10/07	KWG0705419	
Aroclor 1221	ND	U	0.39	1	05/08/07	05/10/07	KWG0705419	
Aroclor 1232	ND	U	0.20	1	05/08/07	05/10/07	KWG0705419	
Aroclor 1242	ND	U	0.20	1	05/08/07	05/10/07	KWG0705419	
Aroclor 1248	ND	U	0.20	1	05/08/07	05/10/07	KWG0705419	
Aroclor 1254	ND	U	0.20	1	05/08/07	05/10/07	KWG0705419	
Aroclor 1260	ND	U	0.20	1	05/08/07	05/10/07	KWG0705419	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	27-121	05/10/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Water

Service Request: K0703836

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535
Analysis Method: 8082

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
S-2-050207	K0703836-001	82
S-3-050207	K0703836-002	76
S-4-050207	K0703836-003	67
Method Blank	KWG0705419-4	76
Batch QC	K0703733-002	81
Batch QCMS	KWG0705419-1	79
Batch QCDMS	KWG0705419-2	88
Lab Control Sample	KWG0705419-3	76

Surrogate Recovery Control Limits (%)

Sur1 =	Decachlorobiphenyl	27-121

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/08/2007
Sample Matrix:	Water	**Date Analyzed:**	05/14/2007

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K0703733-002	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0705419

		Batch QCMS KWG0705419-1 Matrix Spike			Batch QCDMS KWG0705419-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	1.55	1.94	80	1.69	1.92	88	16-139	9	30
Aroclor 1260	ND	1.54	1.94	79	1.76	1.92	91	45-110	13	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00070

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/08/2007
Sample Matrix:	Water	**Date Analyzed:**	05/10/2007

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535	**Units:**	ug/L
Analysis Method:	8082	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0705419

	Lab Control Sample KWG0705419-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	1.64	2.00	82	30-113
Aroclor 1260	1.70	2.00	85	42-110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00071

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Sediment	**Date Received:**	05/04/2007

Polychlorinated Biphenyls (PCBs)

Sample Name:	SS-3-050207	**Units:**	ug/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1221	ND	U	22	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1232	ND	U	11	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1242	ND	U	11	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1248	ND	U	11	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1254	**69**		11	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1260	**75**		11	1	05/10/07	05/25/07	KWG0705498	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	95	33-141	05/25/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0705498-4	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	4.0	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1221	ND	U	8.0	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1232	ND	U	4.0	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1242	ND	U	4.0	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1248	ND	U	4.0	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1254	ND	U	4.0	1	05/10/07	05/25/07	KWG0705498	
Aroclor 1260	ND	U	4.0	1	05/10/07	05/25/07	KWG0705498	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	33-141	05/25/07	Acceptable

Comments:

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland		
Sample Matrix:	Sediment		

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3540C	**Units:**	PERCENT
Analysis Method:	8082	**Level:**	Low

Sample Name	Lab Code	Sur1
SS-3-050207	K0703836-004	95
Method Blank	KWG0705498-4	82
Batch QC	K0703870-004	82
Batch QCMS	KWG0705498-1	92
Batch QCDMS	KWG0705498-2	81
Lab Control Sample	KWG0705498-3	78

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 33-141

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/10/2007
Sample Matrix:	Soil	**Date Analyzed:**	05/25/2007

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0703870-004	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0705498

		Batch QCMS KWG0705498-1 Matrix Spike			Batch QCDMS KWG0705498-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	195	197	99	182	197	92	33-153	7	40
Aroclor 1260	48	264	197	110	258	197	106	31-167	3	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00075

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/10/2007
Sample Matrix:	Soil	**Date Analyzed:**	05/25/2007

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3540C	**Units:**	ug/Kg
Analysis Method:	8082	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0705498

	Lab Control Sample KWG0705498-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	160	200	80	42-124
Aroclor 1260	176	200	88	61-128

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00076

Polynuclear Aromatic Hydrocarbons
EPA Method 8270C

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Polynuclear Aromatic Hydrocarbons

Sample Name:	S-2-050207	**Units:**	ug/L
Lab Code:	K0703836-001	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.015**		0.0077	1	05/08/07	05/18/07	KWG0705560	
2-Methylnaphthalene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Acenaphthylene	**0.019**	D	0.016	2	05/08/07	05/21/07	KWG0705560	
Acenaphthene	ND	U	0.016	2	05/08/07	05/21/07	KWG0705560	
Dibenzofuran	ND	U	0.016	2	05/08/07	05/21/07	KWG0705560	
Fluorene	ND	U	0.016	2	05/08/07	05/21/07	KWG0705560	
Phenanthrene	**0.027**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Anthracene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Fluoranthene	**0.018**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Pyrene	**0.019**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Benz(a)anthracene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Chrysene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(b)fluoranthene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(k)fluoranthene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(a)pyrene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Indeno(1,2,3-cd)pyrene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Dibenz(a,h)anthracene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(g,h,i)perylene	**0.0085**		0.0077	1	05/08/07	05/18/07	KWG0705560	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	63	26-131	05/21/07	Acceptable
Fluoranthene-d10	66	28-150	05/18/07	Acceptable
Terphenyl-d14	74	32-157	05/18/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Polynuclear Aromatic Hydrocarbons

Sample Name:	S-3-050207	**Units:**	ug/L
Lab Code:	K0703836-002	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.0087**		0.0077	1	05/08/07	05/18/07	KWG0705560	
2-Methylnaphthalene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Acenaphthylene	ND	Ui	0.0082	1	05/08/07	05/18/07	KWG0705560	
Acenaphthene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Dibenzofuran	**0.011**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Fluorene	**0.0084**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Phenanthrene	**0.024**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Anthracene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Fluoranthene	**0.016**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Pyrene	**0.017**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Benz(a)anthracene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Chrysene	**0.0085**		0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(b)fluoranthene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(k)fluoranthene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(a)pyrene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Indeno(1,2,3-cd)pyrene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Dibenz(a,h)anthracene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	
Benzo(g,h,i)perylene	ND	U	0.0077	1	05/08/07	05/18/07	KWG0705560	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	61	26-131	05/18/07	Acceptable
Fluoranthene-d10	63	28-150	05/18/07	Acceptable
Terphenyl-d14	68	32-157	05/18/07	Acceptable

Comments:

000079

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Polynuclear Aromatic Hydrocarbons

Sample Name:	S-4-050207	**Units:**	ug/L
Lab Code:	K0703836-003	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	Ui	0.017	1	05/08/07	05/17/07	KWG0705560	
2-Methylnaphthalene	**0.014**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Acenaphthylene	ND	U	0.0077	1	05/08/07	05/17/07	KWG0705560	
Acenaphthene	ND	U	0.0077	1	05/08/07	05/17/07	KWG0705560	
Dibenzofuran	ND	Ui	0.013	1	05/08/07	05/17/07	KWG0705560	
Fluorene	ND	U	0.0077	1	05/08/07	05/17/07	KWG0705560	
Phenanthrene	ND	Ui	0.033	1	05/08/07	05/17/07	KWG0705560	
Anthracene	ND	U	0.0077	1	05/08/07	05/17/07	KWG0705560	
Fluoranthene	**0.053**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Pyrene	**0.078**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Benz(a)anthracene	**0.012**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Chrysene	**0.030**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Benzo(b)fluoranthene	**0.034**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Benzo(k)fluoranthene	ND	U	0.0077	1	05/08/07	05/17/07	KWG0705560	
Benzo(a)pyrene	**0.017**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Indeno(1,2,3-cd)pyrene	**0.020**		0.0077	1	05/08/07	05/17/07	KWG0705560	
Dibenz(a,h)anthracene	ND	U	0.0077	1	05/08/07	05/17/07	KWG0705560	
Benzo(g,h,i)perylene	**0.027**		0.0077	1	05/08/07	05/17/07	KWG0705560	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	70	26-131	05/17/07	Acceptable
Fluoranthene-d10	68	28-150	05/17/07	Acceptable
Terphenyl-d14	70	32-157	05/17/07	Acceptable

Comments:

00080

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0705560-3	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
2-Methylnaphthalene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Acenaphthylene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Acenaphthene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Dibenzofuran	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Fluorene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Phenanthrene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Anthracene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Fluoranthene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Pyrene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Benz(a)anthracene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Chrysene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Benzo(b)fluoranthene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Benzo(k)fluoranthene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Benzo(a)pyrene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Indeno(1,2,3-cd)pyrene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Dibenz(a,h)anthracene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*
Benzo(g,h,i)perylene	ND	U	0.0077	1	05/08/07	06/04/07	KWG0705560	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	81	26-131	06/02/07	Acceptable
Fluoranthene-d10	91	28-150	06/02/07	Acceptable
Terphenyl-d14	113	32-157	06/02/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Sediment	**Date Received:**	05/04/2007

Polynuclear Aromatic Hydrocarbons

Sample Name:	SS-3-050207	**Units:**	ug/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	130		6.6	1	05/14/07	05/17/07	KWG0705572	
2-Methylnaphthalene	80		6.6	1	05/14/07	05/17/07	KWG0705572	
Acenaphthylene	31		6.6	1	05/14/07	05/17/07	KWG0705572	
Acenaphthene	24		6.6	1	05/14/07	05/17/07	KWG0705572	
Fluorene	47		6.6	1	05/14/07	05/17/07	KWG0705572	
Dibenzofuran	67		6.6	1	05/14/07	05/17/07	KWG0705572	
Phenanthrene	670		6.6	1	05/14/07	05/17/07	KWG0705572	
Anthracene	58		6.6	1	05/14/07	05/17/07	KWG0705572	
Fluoranthene	780		6.6	1	05/14/07	05/17/07	KWG0705572	
Pyrene	1000		6.6	1	05/14/07	05/17/07	KWG0705572	
Benzo(b)fluoranthene	570		6.6	1	05/14/07	05/17/07	KWG0705572	
Benzo(k)fluoranthene	180		6.6	1	05/14/07	05/17/07	KWG0705572	
Benz(a)anthracene	230		6.6	1	05/14/07	05/17/07	KWG0705572	
Chrysene	390		6.6	1	05/14/07	05/17/07	KWG0705572	
Benzo(a)pyrene	320		6.6	1	05/14/07	05/17/07	KWG0705572	
Indeno(1,2,3-cd)pyrene	500		6.6	1	05/14/07	05/17/07	KWG0705572	
Dibenz(a,h)anthracene	100		6.6	1	05/14/07	05/17/07	KWG0705572	
Benzo(g,h,i)perylene	1100		6.6	1	05/14/07	05/17/07	KWG0705572	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	47	10-123	05/17/07	Acceptable
Fluoranthene-d10	41	10-136	05/17/07	Acceptable
Terphenyl-d14	55	32-123	05/17/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0705572-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
2-Methylnaphthalene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Acenaphthylene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Acenaphthene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Fluorene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Dibenzofuran	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Phenanthrene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Anthracene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Fluoranthene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Pyrene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Benzo(b)fluoranthene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Benzo(k)fluoranthene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Benz(a)anthracene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Chrysene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Benzo(a)pyrene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Indeno(1,2,3-cd)pyrene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Dibenz(a,h)anthracene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	
Benzo(g,h,i)perylene	ND	U	2.5	1	05/14/07	05/16/07	KWG0705572	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	58	10-123	05/16/07	Acceptable
Fluoranthene-d10	61	10-136	05/16/07	Acceptable
Terphenyl-d14	67	32-123	05/16/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Water

Service Request: K0703836

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3520
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
S-2-050207	K0703836-001	63 D	66	74
S-3-050207	K0703836-002	61	63	68
S-4-050207	K0703836-003	70	68	70
Method Blank	KWG0705560-3	81 D	91 D	113 D
Lab Control Sample	KWG0705560-1	88 D	88 D	101 D
Duplicate Lab Control Sample	KWG0705560-2	94 D	86 D	107 D

Surrogate Recovery Control Limits (%)

Sur1 =	Fluorene-d10	26-131
Sur2 =	Fluoranthene-d10	28-150
Sur3 =	Terphenyl-d14	32-157

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Sediment

Service Request: K0703836

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SS-3-050207	K0703836-004	47	41	55
Method Blank	KWG0705572-5	58	61	67
SS-3-050207MS	KWG0705572-1	43 D	39 D	58 D
SS-3-050207DMS	KWG0705572-2	43 D	42 D	54 D
Lab Control Sample	KWG0705572-3	59	56	81
Duplicate Lab Control Sample	KWG0705572-4	59	63	64

Surrogate Recovery Control Limits (%)

Sur1 =	Fluorene-d10	10-123
Sur2 =	Fluoranthene-d10	10-136
Sur3 =	Terphenyl-d14	32-123

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/14/2007
Sample Matrix:	Sediment	**Date Analyzed:**	05/17/2007

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	SS-3-050207	**Units:**	ug/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0705572

		SS-3-050207MS KWG0705572-1 Matrix Spike			SS-3-050207DMS KWG0705572-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	130	414	673	42	428	667	44	10-121	3	40
2-Methylnaphthalene	80	442	673	54	487	667	61	13-126	10	40
Acenaphthylene	31	381	673	52	385	667	53	21-121	1	40
Acenaphthene	24	376	673	52	386	667	54	18-125	3	40
Fluorene	47	409	673	54	392	667	52	22-125	4	40
Dibenzofuran	67	428	673	54	435	667	55	21-126	2	40
Phenanthrene	670	1000	673	50	1050	667	58	10-143	5	40
Anthracene	58	427	673	55	446	667	58	19-133	4	40
Fluoranthene	780	1030	673	37	1130	667	53	10-149	10	40
Pyrene	1000	1470	673	62	1400	667	53	10-150	5	40
Benzo(b)fluoranthene	570	850	673	42	842	667	41	12-144	1	40
Benzo(k)fluoranthene	180	492	673	46	498	667	47	11-145	1	40
Benz(a)anthracene	230	572	673	51	599	667	56	12-139	5	40
Chrysene	390	862	673	70	883	667	73	12-145	2	40
Benzo(a)pyrene	320	622	673	45	642	667	48	10-148	3	40
Indeno(1,2,3-cd)pyrene	500	867	673	55	949	667	67	10-151	9	40
Dibenz(a,h)anthracene	100	429	673	49	469	667	55	12-143	9	40
Benzo(g,h,i)perylene	1100	1340	673	29	1440	667	45	10-148	8	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/08/2007
Sample Matrix:	Water	**Date Analyzed:**	06/02/2007

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3520	**Units:**	ug/L
Analysis Method:	8270C SIM	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0705560

	Lab Control Sample KWG0705560-1 **Lab Control Spike**			Duplicate Lab Control Sample KWG0705560-2 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	3.75	5.00	75	4.26	5.00	85	35-133	13	30
2-Methylnaphthalene	3.61	5.00	72	4.17	5.00	83	23-141	14	30
Acenaphthylene	4.28	5.00	86	4.90	5.00	98	40-138	13	30
Acenaphthene	4.18	5.00	84	4.75	5.00	95	41-135	13	30
Dibenzofuran	4.42	5.00	88	4.92	5.00	98	10-183	11	30
Fluorene	4.57	5.00	91	5.03	5.00	101	43-139	10	30
Phenanthrene	4.41	5.00	88	5.01	5.00	100	45-138	13	30
Anthracene	4.68	5.00	94	5.45	5.00	109	36-139	15	30
Fluoranthene	4.84	5.00	97	4.96	5.00	99	43-148	3	30
Pyrene	5.35	5.00	107	5.15	5.00	103	37-154	4	30
Benz(a)anthracene	5.19	5.00	104	5.73	5.00	115	46-136	10	30
Chrysene	5.38	5.00	108	6.09	5.00	122	51-134	12	30
Benzo(b)fluoranthene	4.31	5.00	86	4.92	5.00	98	53-139	13	30
Benzo(k)fluoranthene	4.91	5.00	98	5.52	5.00	110	53-140	12	30
Benzo(a)pyrene	4.44	5.00	89	4.96	5.00	99	43-138	11	30
Indeno(1,2,3-cd)pyrene	4.15	5.00	83	4.53	5.00	91	40-146	9	30
Dibenz(a,h)anthracene	4.65	5.00	93	5.11	5.00	102	37-148	9	30
Benzo(g,h,i)perylene	4.20	5.00	84	4.69	5.00	94	42-146	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00087

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/14/2007
Sample Matrix:	Soil	**Date Analyzed:**	05/17/2007

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270C SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0705572

	Lab Control Sample KWG0705572-3 Lab Control Spike			Duplicate Lab Control Sample KWG0705572-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	327	500	65	334	500	67	48-107	2	40
2-Methylnaphthalene	350	500	70	407	500	81	42-121	15	40
Acenaphthylene	360	500	72	362	500	72	50-111	1	40
Acenaphthene	362	500	72	367	500	73	50-110	1	40
Fluorene	375	500	75	389	500	78	52-112	4	40
Dibenzofuran	378	500	76	389	500	78	50-115	3	40
Phenanthrene	391	500	78	385	500	77	53-112	2	40
Anthracene	404	500	81	402	500	80	52-115	0	40
Fluoranthene	337	500	67	406	500	81	55-121	18	40
Pyrene	492	500	98	409	500	82	47-129	18	40
Benzo(b)fluoranthene	363	500	73	391	500	78	55-125	8	40
Benzo(k)fluoranthene	376	500	75	410	500	82	55-124	9	40
Benz(a)anthracene	382	500	76	383	500	77	51-118	0	40
Chrysene	386	500	77	388	500	78	54-120	1	40
Benzo(a)pyrene	398	500	80	429	500	86	56-122	8	40
Indeno(1,2,3-cd)pyrene	464	500	93	471	500	94	42-133	2	40
Dibenz(a,h)anthracene	436	500	87	454	500	91	37-135	4	40
Benzo(g,h,i)perylene	427	500	85	420	500	84	49-125	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00088

Semi-Volatile Organic Compounds
EPA Method 8270C

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-2-050207	**Units:**	ug/L
Lab Code:	K0703836-001	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	1	05/08/07	05/14/07	KWG0705428	
Dimethyl Phthalate	**0.22**		0.20	1	05/08/07	05/14/07	KWG0705428	
Diethyl Phthalate	**0.47**		0.20	1	05/08/07	05/14/07	KWG0705428	
Di-n-butyl Phthalate	**0.21**		0.20	1	05/08/07	05/14/07	KWG0705428	
Butyl Benzyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Bis(2-ethylhexyl) Phthalate	**1.4**		0.96	1	05/08/07	05/14/07	KWG0705428	
Di-n-octyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	92	25-118	05/14/07	Acceptable
Nitrobenzene-d5	81	24-131	05/14/07	Acceptable
2-Fluorobiphenyl	51	26-114	05/14/07	Acceptable
Terphenyl-d14	87	28-144	05/14/07	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-3-050207	**Units:**	ug/L
Lab Code:	K0703836-002	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	1	05/08/07	05/14/07	KWG0705428	
Dimethyl Phthalate	**0.32**		0.20	1	05/08/07	05/14/07	KWG0705428	
Diethyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Di-n-butyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Butyl Benzyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Bis(2-ethylhexyl) Phthalate	ND	U	0.96	1	05/08/07	05/14/07	KWG0705428	
Di-n-octyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	88	25-118	05/14/07	Acceptable
Nitrobenzene-d5	75	24-131	05/14/07	Acceptable
2-Fluorobiphenyl	75	26-114	05/14/07	Acceptable
Terphenyl-d14	82	28-144	05/14/07	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Water	**Date Received:**	05/04/2007

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-4-050207	**Units:**	ug/L
Lab Code:	K0703836-003	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	1	05/08/07	05/14/07	KWG0705428	
Dimethyl Phthalate	**0.29**		0.20	1	05/08/07	05/14/07	KWG0705428	
Diethyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Di-n-butyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Butyl Benzyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Bis(2-ethylhexyl) Phthalate	ND	U	0.96	1	05/08/07	05/14/07	KWG0705428	
Di-n-octyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	90	25-118	05/14/07	Acceptable
Nitrobenzene-d5	80	24-131	05/14/07	Acceptable
2-Fluorobiphenyl	72	26-114	05/14/07	Acceptable
Terphenyl-d14	65	28-144	05/14/07	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0705428-3	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	1	05/08/07	05/14/07	KWG0705428	
Dimethyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Diethyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Di-n-butyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Butyl Benzyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	
Bis(2-ethylhexyl) Phthalate	ND	U	0.96	1	05/08/07	05/14/07	KWG0705428	
Di-n-octyl Phthalate	ND	U	0.20	1	05/08/07	05/14/07	KWG0705428	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	88	25-118	05/14/07	Acceptable
Nitrobenzene-d5	81	24-131	05/14/07	Acceptable
2-Fluorobiphenyl	74	26-114	05/14/07	Acceptable
Terphenyl-d14	86	28-144	05/14/07	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Sediment	**Date Received:**	05/04/2007

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SS-3-050207	**Units:**	ug/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	680	5	05/16/07	05/30/07	KWG0705656	
Dimethyl Phthalate	ND	U	680	5	05/16/07	05/30/07	KWG0705656	
Diethyl Phthalate	ND	U	680	5	05/16/07	05/30/07	KWG0705656	
Di-n-butyl Phthalate	**840**	D	680	5	05/16/07	05/30/07	KWG0705656	
Butyl Benzyl Phthalate	ND	U	680	5	05/16/07	05/30/07	KWG0705656	
Bis(2-ethylhexyl) Phthalate	**12000**	D	6800	5	05/16/07	05/30/07	KWG0705656	
Di-n-octyl Phthalate	ND	U	680	5	05/16/07	05/30/07	KWG0705656	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	67	17-101	05/30/07	Acceptable
Nitrobenzene-d5	68	10-108	05/30/07	Acceptable
2-Fluorobiphenyl	65	10-108	05/30/07	Acceptable
Terphenyl-d14	91	26-122	05/30/07	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0705656-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	5.0	1	05/16/07	05/23/07	KWG0705656	
Dimethyl Phthalate	ND	U	5.0	1	05/16/07	05/23/07	KWG0705656	
Diethyl Phthalate	ND	U	5.0	1	05/16/07	05/23/07	KWG0705656	
Di-n-butyl Phthalate	ND	U	7.9	1	05/16/07	05/23/07	KWG0705656	
Butyl Benzyl Phthalate	ND	U	5.0	1	05/16/07	05/23/07	KWG0705656	
Bis(2-ethylhexyl) Phthalate	ND	U	50	1	05/16/07	05/23/07	KWG0705656	
Di-n-octyl Phthalate	ND	U	5.0	1	05/16/07	05/23/07	KWG0705656	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	17-101	05/23/07	Acceptable
Nitrobenzene-d5	38	10-108	05/23/07	Acceptable
2-Fluorobiphenyl	42	10-108	05/23/07	Acceptable
Terphenyl-d14	74	26-122	05/23/07	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Water

Service Request: K0703836

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
S-2-050207	K0703836-001	92	81	51	87
S-3-050207	K0703836-002	88	75	75	82
S-4-050207	K0703836-003	90	80	72	65
Method Blank	KWG0705428-3	88	81	74	86
Lab Control Sample	KWG0705428-1	93	84	76	87
Duplicate Lab Control Sample	KWG0705428-2	103	92	85	95

Surrogate Recovery Control Limits (%)

Sur1 =	Phenol-d6	25-118
Sur2 =	Nitrobenzene-d5	24-131
Sur3 =	2-Fluorobiphenyl	26-114
Sur4 =	Terphenyl-d14	28-144

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

00096

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall-Portland
Sample Matrix: Sediment

Service Request: K0703836

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
SS-3-050207	K0703836-004	67 D #	68 D #	65 D #	91 D #
Method Blank	KWG0705656-5	51	38	42	74
Batch QC	K0703896-001	113 D #	99 D #	91 D #	0 D #
Batch QCMS	KWG0705656-1	82	81	75	234 D #
Batch QCDMS	KWG0705656-2	74	73	71	0 D #
Lab Control Sample	KWG0705656-3	75	67	65	80
Duplicate Lab Control Sample	KWG0705656-4	77	68	69	77

Surrogate Recovery Control Limits (%)

Sur1	= Phenol-d6	17-101
Sur2	= Nitrobenzene-d5	10-108
Sur3	= 2-Fluorobiphenyl	10-108
Sur4	= Terphenyl-d14	26-122

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

00097

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/16/2007
Sample Matrix:	Soil	**Date Analyzed:**	05/23/2007 - 05/30/2007

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0703896-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0705656

		Batch QCMS KWG0705656-1 Matrix Spike			Batch QCDMS KWG0705656-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
4-Methylphenol	ND	315	249	126 *	410	249	164 *	10-119	26	40
Dimethyl Phthalate	ND	378	249	152 *	787	249	316 *	26-110	70 *	40
Diethyl Phthalate	ND	318	249	127 *	238	249	96	12-124	28	40
Di-n-butyl Phthalate	ND	ND	249	0 *	ND	249	0 *	10-137		40
Butyl Benzyl Phthalate	3300	4640	249	520 #	3590	249	100 #	10-135	25	40
Bis(2-ethylhexyl) Phthalate	ND	4880	249	1959 *	8040	249	3224 *	10-137	49 *	40
Di-n-octyl Phthalate	ND	ND	249	0 *	ND	249	0 *	24-116		40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00098

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/08/2007
Sample Matrix:	Water	**Date Analyzed:**	05/14/2007

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520	**Units:**	ug/L
Analysis Method:	8270C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0705428

	Lab Control Sample KWG0705428-1 **Lab Control Spike**			Duplicate Lab Control Sample KWG0705428-2 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
4-Methylphenol	4.35	5.00	87	4.71	5.00	94	30-116	8	30
Dimethyl Phthalate	4.46	5.00	89	5.02	5.00	100	43-116	12	30
Diethyl Phthalate	4.08	5.00	82	4.57	5.00	91	42-120	11	30
Di-n-butyl Phthalate	4.61	5.00	92	5.21	5.00	104	46-119	12	30
Butyl Benzyl Phthalate	4.62	5.00	92	5.16	5.00	103	43-121	11	30
Bis(2-ethylhexyl) Phthalate	4.67	5.00	93	5.15	5.00	103	34-136	10	30
Di-n-octyl Phthalate	4.80	5.00	96	5.32	5.00	106	39-123	10	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/16/2007
Sample Matrix:	Soil	**Date Analyzed:**	05/23/2007

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0705656

	Lab Control Sample KWG0705656-3 **Lab Control Spike**			Duplicate Lab Control Sample KWG0705656-4 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
4-Methylphenol	157	250	63	157	250	63	24-94	0	40
Dimethyl Phthalate	162	250	65	174	250	69	33-107	7	40
Diethyl Phthalate	169	250	68	171	250	68	35-107	1	40
Di-n-butyl Phthalate	198	250	79	190	250	76	37-118	4	40
Butyl Benzyl Phthalate	201	250	80	195	250	78	36-123	3	40
Bis(2-ethylhexyl) Phthalate	210	250	84	202	250	81	34-133	4	40
Di-n-octyl Phthalate	204	250	81	196	250	79	34-125	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00100

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

June 11, 2007 Analytical Report for Service Request No: K0703836

John Renda
Anchor Environmental
6650 SW Redwood Lane
Suite 110
Portland, OR 97224

RE: McCall-Portland

Dear John:

Enclosed are the additional report pages for the samples submitted to our laboratory on May 04, 2007. For your reference, these analyses have been assigned our service request number K0703836.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@kelso.caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/dj

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

MEMBER ACIL

nelac

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	05/02/2007
Sample Matrix:	Sediment	**Date Received:**	05/04/2007

Diesel and Residual Range Organics

Sample Name:	SS-3-050207	**Units:**	mg/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**1400**	DH	340	5	05/11/07	05/16/07	KWG0705535	
Residual Range Organics (RRO)	**9300**	DO	1400	5	05/11/07	05/16/07	KWG0705535	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	112	50-150	05/16/07	Acceptable
n-Triacontane	94	50-150	05/16/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Diesel and Residual Range Organics

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG0705535-3	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	25	1	05/11/07	05/15/07	KWG0705535	
Residual Range Organics (RRO)	ND	U	100	1	05/11/07	05/15/07	KWG0705535	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	88	50-150	05/15/07	Acceptable
n-Triacontane	98	50-150	05/15/07	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland		
Sample Matrix:	Sediment		

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method:	EPA 3550B	**Units:**	PERCENT
Analysis Method:	NWTPH-Dx	**Level:**	Low

Sample Name	Lab Code	Sur1	Sur2
SS-3-050207	K0703836-004	112 D	94 D
SS-3-050207DUP	KWG0705535-4	113 D	129 D
Method Blank	KWG0705535-3	88	98
Lab Control Sample	KWG0705535-2	96	102

Surrogate Recovery Control Limits (%)

Sur1 = o-Terphenyl	50-150
Sur2 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/11/2007
Sample Matrix:	Sediment	**Date Analyzed:**	05/16/2007

Duplicate Sample Summary
Diesel and Residual Range Organics

Sample Name:	SS-3-050207	**Units:**	mg/Kg
Lab Code:	K0703836-004	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	NWTPH-Dx	**Extraction Lot:**	KWG0705535

Analyte Name	**MRL**	**Sample Result**	SS-3-050207DUP KWG0705535-4 **Duplicate Sample Result**	**Average**	**Relative Percent Difference**	**RPD Limit**
Diesel Range Organics (DRO)	340	1400	1400	1400	1	40
Residual Range Organics (RRO)	1400	9300	9300	9300	0	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K0703836
Project:	McCall-Portland	**Date Extracted:**	05/11/2007
Sample Matrix:	Sediment	**Date Analyzed:**	05/15/2007

Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method:	EPA 3550B	**Units:**	mg/Kg
Analysis Method:	NWTPH-Dx	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0705535

	Lab Control Sample KWG0705535-2 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Diesel Range Organics (DRO)	245	267	92	62-159
Residual Range Organics (RRO)	127	133	95	53-143

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ANCHOR
ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
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Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

April 13, 2007
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: First Quarter 2007 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the first quarter 2007, and work planned for the second quarter 2007 for the McCall Oil and Chemical site in Portland, Oregon.

WORK COMPLETED FIRST QUARTER 2007

- data management and reporting
- prepared and submitted Stormwater and Catch Basin Sediment Sampling Plan (February 2, 2007)
- received and reviewed DEQ's March 5, 2007 comments on Stormwater and Catch Basin Sediment Sampling Plan
- submitted email response to DEQ's March 5, 2007 comments on Stormwater and Catch Basin Sediment Sampling Plan
- project management and meetings

PLANNED SECOND QUARTER 2007 RI TASKS

- data management and reporting
- meet with DEQ to discuss project status and DEQ's March 5, 2007 comments on Stormwater and Catch Basin Sediment Sampling Plan (April 2, 2007)

- prepare written response to DEQ's March 5, 2007 comments on Stormwater and Catch Basin Sediment Sampling Plan (April 9, 2007)
- collect stormwater and catch basin sediment samples pending DEQ's authorization (weather permitting)
- project management and meetings

RESULTS

No samples were collected in first quarter 2007 and no new data was generated.

PROBLEMS ENCOUNTERED

No problems were encountered during first quarter 2007.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

ANCHOR
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Anchor Environmental, L.L.C.
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Phone 503.670.1108
Fax 503.670.1128

January 12, 2007
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Fourth Quarter 2006 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the fourth quarter 2006, and work planned for the first quarter 2007 for the McCall Oil and Chemical site in Portland, Oregon.

WORK COMPLETED FOURTH QUARTER 2006

- data management and reporting
- project management and meetings

PLANNED FIRST QUARTER 2007 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

No samples were collected in fourth quarter 2006 and no new data was generated.

PROBLEMS ENCOUNTERED

No problems were encountered during fourth quarter 2006.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
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October 15, 2006
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Third Quarter 2006 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the third quarter 2006, and work planned for the fourth quarter 2006 for the McCall Oil and Chemical site in Portland, Oregon.

WORK COMPLETED THIRD QUARTER 2006

- Prepared report *Assessment of McCall Oil and Chemical Site Impacts to The Willamette River (September, 2006)*, and submitted report to DEQ on September 29, 2006.
- data management and reporting
- project management and meetings

PLANNED FOURTH QUARTER 2006 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

No samples were collected in third quarter 2006 and no new data was generated.

McCall provided the facility Remedial Investigation report to DEQ in July 2004 and have received no comments from the agency to date. Last month McCall provided DEQ with the report *Assessment of McCall Oil and Chemical Site Impacts to the Willamette River,* which includes a complete evaluation of upland sources. The conclusions of these reports are that the facility has been fully characterized and that source control actions are not necessary. McCall is not planning any further site characterization activities related to Willamette river source control. McCall looks forward to discussing the July 2004 RI and September 2006 Assessment reports with DEQ.

PROBLEMS ENCOUNTERED

No problems were encountered during third quarter 2006.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G. for
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

ASSESSMENT OF MCCALL OIL AND CHEMICAL SITE IMPACTS TO THE WILLAMETTE RIVER

Prepared for

McCall Oil and Chemical Corporation

Portland, Oregon

Prepared by

Anchor Environmental, L.L.C.

6650 SW Redwood Lane, Suite 110

Portland, Oregon 97224-7192

September 2006

ASSESSMENT OF MCCALL OIL AND CHEMICAL SITE IMPACTS TO THE WILLAMETTE RIVER

Prepared for

McCall Oil and Chemical Corporation

Portland, Oregon

Prepared by

Anchor Environmental, L.L.C.

6650 SW Redwood Lane, Suite 110

Portland, Oregon 97224-7192

September 2006

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1 SUMMARY OF FINDINGS

An assessment of the environmental conditions at the McCall Oil and Chemical Site (Site) was performed to determine whether historical or ongoing Site activities may be causing impacts to the beneficial uses of the Willamette River. Following are the key findings of this assessment:

- Chemical concentrations of constituents of interest (COIs) in sediments adjacent to the Site are below relevant risk-based sediment quality guidelines, including draft Lower Willamette Group (LWG) Level 1 ("no effects") levels (Windward et al. 2006), Washington State freshwater Lowest Apparent Effects Thresholds (LAET) (WDOE 2003), and consensus-based Probable Effects Levels (PEL) (MacDonald et al. 2000). These results are confirmed by bioassay tests conducted in sediments adjacent to the Site, which exhibited no biological effects to *Chironomus* growth and survival or *Hyalella* survival. Thus there is no evidence that discharges from the Site have resulted in contaminant accumulations in sediments at concentrations that would cause direct toxicity to benthic organisms in the Willamette River.
- None of the constituents of concern in shoreline monitoring wells at the Site were above chronic water quality criteria in any of the monitoring events (see Table 13). Therefore, there is no evidence that groundwater discharges from the Site are causing direct toxicity to aquatic life in the Willamette River.
- In stormwater samples from the Site, concentrations of polynuclear aromatic hydrocarbons (PAHs), semivolatile organic compounds (SVOCs), arsenic, and chromium are well below their respective chronic water quality criteria (see Table 14). Total copper, cadmium, and lead concentrations are near or below naturally occurring background values in a majority of samples. Zinc concentrations, although higher than background, are nevertheless lower than the mean zinc concentration in ambient urban runoff from the Portland metropolitan area, and well below the National Pollutant Discharge Elimination System (NPDES) stormwater benchmark. Therefore, stormwater discharges from the Site are expected to cause negligible, if any, effects on aquatic life in the Willamette River, especially when consideration is given to the intermittent and variable nature of stormwater discharges as well as mixing and dilution processes in the receiving water.
- The total loadings of metals and PAHs from stormwater and groundwater at the Site are negligible compared to other sources in and around the harbor, and thus the Site provides an insignificant contribution to bioaccumulation risk in the Willamette River.

In particular, it is estimated that Site contribution to the total load of metals and PAHs to the harbor ranges from less than one thousandth of a percent to a few tenths of a percent compared to naturally occurring background metals in transit in the river and ambient urban runoff from the Portland metropolitan area. Other sources of metals and PAHs, including discharges from vessels and marinas, combined sewer overflows, and other less-controlled industrial sites will further dwarf McCall's negligible contribution.

- McCall continues to implement stormwater best management practices (BMPs) to minimize the potential for mobilization of site-related constituents to the river, and to maintain the effectiveness of its ongoing source control efforts. Site stormwater BMPs include use of an oil-water separator to treat runoff from the oil terminal, catch basin inlet protection, routine cleanout of catch basins, and maintenance of Spill Prevention, Countermeasures, and Control Plan (SPCC) plans and procedures.

2 INTRODUCTION

2.1 Background

The Site is located in the industrialized area of northwest Portland along NW Front Avenue (see Figure 1). It occupies approximately 36 acres on the southwest bank of the Willamette River. The Site encompasses six tax lots. The property is currently occupied by two separate facilities: McCall Oil and Chemical Corporation (MOCC), which operates a marine terminal and asphalt facility, and Quadra Chemical (Quadra), which operates the former Great Western Chemical Corporation (GWCC) chemical distribution facility.

Before 1966, most of the land now occupied by the McCall Oil Terminal was submerged beneath the Willamette River (Figure 2). The Port of Portland (Port) created new land along the Willamette during the mid-1960s by dredging and filling along the shore. This land, including a portion of the Site, was deeded to the Port by the State of Oregon in 1967. A detailed description of the ownership and operational history of the Site is in the *McCall Oil and Chemical Corporation Focused Remedial Investigation Workplan* (Workplan) (IT Corporation, November 16, 2000), and in the Remedial Investigation (RI) Proposal, which is Appendix D to the Workplan.

Until 1995, the GWCC facilities consisted of two operating units, the GWCC Technical Center and the GWCC Portland Branch. The Technical Center included the former Chemax operations. In 1995, GWCC's two operating units were merged into the Portland Branch. Current and historical activities associated with the operations of each of these facilities are discussed in detail in chapters two through five of the RI Proposal (Appendix D to the Workplan). McCall purchased the marine terminal property from the Port in 2004 and now owns all of the property shown on Figure 6.

The Site is included in the Willamette Greenway (Greenway) established by the City of Portland to monitor and control land use next to the river. The Site and surrounding properties are zoned for heavy industrial use, both within the Greenway on the northwest (i.e., downriver) bank and outside of the Greenway. Surrounding industries include: petroleum bulk distribution terminals, chemical plants, sand and gravel operations, a steel fabrication facility, shipyards, and rail yards.

In the mid-1920s, the Port purchased the property now occupied by MOCC and Quadra as part of an approximately 65-acre parcel that stretched from the lands now owned by Conoco/Phillips on the west, to the Willamette River. Prior to the mid-1940s the property was vacant. In 1946, Pioneer Flintkote Company (Flintkote) purchased two parcels from the Port. Those parcels are currently occupied by Quadra and the MOCC asphalt plant, respectively.

Flintkote manufactured asphalt roofing shingles and tiles on the property from 1947 to approximately 1982. Historical occupation records indicate that Standard Oil Company operated a distribution center at the site during the 1950s (SAFE 1994). By 1960, Douglas Oil Company (Douglas) occupied this address, and operated an asphalt facility. In 1962, Douglas purchased the facility from Flintkote. Douglas and Flintkote continued to operate their respective facilities until 1982, when both parcels and the improvements were sold to MOCC. Chemax began operations on the former Flintkote site in early 1984. The Portland branch began its on-site operations in late 1985. In 1985, MOCC operated a lube oil distribution facility on part of the asphalt plant site. The lube oil operations were discontinued in 1991.

In the early to mid-1960s, the Port used dredge spoils from the Willamette River channel (primarily fine sand) to create new land along the Willamette River next to the Flintkote and Douglas facilities. As stated previously, this land was subsequently deeded to the Port by the state of Oregon in 1967. In the mid-1970s, MOCC constructed the marine terminal on the filled land.

2.2 Purpose

This report pulls together the findings from MOCC upland investigations and LWG in-water investigations to provide an assessment of river impacts from historic and current Site industrial operations. This report will show that the environmental information obtained by MOCC and LWG indicate that industrial operations at the Site have not significantly impacted beneficial uses of the Willamette River. Several documents referenced in this report were obtained from publicly available LWG records. We understand that these draft documents are currently under review by EPA and its federal, state, and tribal partners, and are subject to change in whole or in part.

Section 3 of this report describes the Site conditions with focus on the conceptual site model and identification of upland COIs. Section 4 provides a summary of historic releases, cleanup actions, and investigations conducted at the Site and neighboring properties. LWG in-water findings on sediment chemistry and toxicity are described in Section 5. Section 6 is a summary of information on potential upland groundwater and stormwater sources to the river from MOCC and neighboring properties. Section 7 provides a risk screening evaluation of potential impacts of Site groundwater and stormwater to the river.

3 SITE CONDITIONS

This description of Site conditions is from the July 2004 MOCC RI Report, modified to focus on potential upland contaminant pathways to the river.

3.1 Conceptual Site Model

The Conceptual Site Model (CSM) identifies the sources, pathways, and receptors that were considered in designing the focused Workplan (Figure 3). Although MOCC and Quadra operate independently, the CSM covers both facilities because the two facilities are adjacent to each other, and have potentially overlapping exposure pathways to the Willamette River.

The CSM illustrates the site's potential exposure pathways from potential source areas to potential receptors. The CSM considers all media including: soil, groundwater, surface water, sediment, and air.

Five classes of potential receptors were identified on Figure 3 on the basis of current and reasonably likely future land use. The site and surrounding area are currently used for industrial purposes, are zoned industrial, and are likely to remain industrial for the foreseeable future.

Of primary concern to this report are the ecological receptors of the Willamette River. For the purposes of the CSM, all flora and fauna potentially exposed to river water or sediments are grouped under the heading of ecological receptors. Potential secondary contaminant sources to these receptors are groundwater and stormwater (i.e., surface water) that discharge to the Willamette River water and sediments. These are two complete pathways that are addressed in this report.

The CSM also identifies some exposure routes for Site trench workers, construction workers, and industrial (occupational) on-site workers. These exposure pathways do not impact beneficial uses of the Willamette River and are not considered further in this report. They will be considered further in the context of the RIFS being conducted under the Agreement with Oregon Department of Environmental Quality (DEQ).

Recreational users of the Willamette River are unlikely to contact sediments and shallow river water adjacent to the Site during swimming and wading activities because the Site and surrounding properties are industrial in nature with no public access facilities. These are therefore considered insignificant pathways. Fish-eating humans and wildlife may be exposed to contaminants that have bioaccumulated in fish tissue; however, bioaccumulation is a watershed-scale issue that is best evaluated in the context of the regional investigation currently underway by the LWG.

3.2 Contaminants of Interest (COIs)

The Site COIs evaluated by MOCC in the Site upland RI were selected on the basis of chemicals that were (1) historically or currently used or stored at the facility, (2) detected in adjacent Willamette River sediment samples, or (3) detected in Site stormwater. The classes of COIs historically or currently used or stored at the Site include:

- Chlorinated volatile organic compounds (VOCs)
- Total petroleum hydrocarbons (TPH) as diesel and oil
- PAHs
- Metals (in particular, arsenic, chromium, and copper)

TPHs have been tested at the Site for the purpose of identifying and characterizing potential upland source areas. TPH concentrations at the Site were also screened using DEQ's *"Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites"* (DEQ 2003). The DEQ guidance was also used to evaluate toxic components of diesel- and oil-range hydrocarbons in soil and groundwater, PAHs in particular.

Because of the extended history of petroleum storage, handling, and shipping at the various bulk terminals in the vicinity of the Site, the following COI's were included in the investigation, although no significant on-site sources of these chemicals are known:

- TPH as gasoline
- Benzene, toluene, ethylbenzene, xylenes (BTEX), and related target volatile compounds per DEQ (2003)

Chlorinated VOCs have not been identified as Willamette River target compounds by DEQ, but chlorinated VOCs have been detected in groundwater at the site. These have therefore been investigated as COIs for the site.

During the Portland Harbor Sediment Investigation Report (Weston 1998), U.S. Environmental Protection Agency's (EPA's) contractor collected and analyzed sediment samples from six Willamette River locations near the site.

The Weston samples were tested for inorganic, SVOCs, VOCs, pesticides, and organotin compounds. On pages 2 and 3 of the Agreement, the agency listed the following compounds that exceeded baseline concentrations, based on the Weston data, established for the Portland Harbor Study Area:

Surface Sediment Constituents Exceeding Baseline Values:

- Aluminum
- Cadmium
- Cobalt
- Lead
- Mercury
- Zinc
- 4-methylphenol
- butyl benzyl phthalate
- di-n-octyl phthalate

Subsurface Sediment Constituents Exceeding Baseline Values:

- Aluminum
- Barium
- Cobalt
- Mercury
- Zinc
- 4-methylphenol
- dibenzofuran
- LPAH
- HPAH

With one exception, all of the constituent concentrations in sediment were well below dredged material screening levels (USACE et al. 1998). The exception was the shallow sample from SD 120 that had a 4-methylphenol concentration of 880 µg/kg. The dredged material screening level for this compound is 670 µg/kg. Of these chemicals, the four SVOCs and PAHs (see above) were retained for testing at the Site. None of the listed metals are part of any process nor are they stored at the MOCC/GWCC facility. Cadmium, lead, and zinc were added to the list of COIs, not on the basis of the Portland Harbor sediment evaluation, but rather because of their occurrence in Site stormwater. Three additional metals—copper, chromium, and arsenic—were also selected as COIs because they were previously used in the production of wood-treating chemicals (CCA) on Site.

In summary, the following COIs were identified for investigation during the Site upland RI:

- Chlorinated VOCs
- TPH as diesel, oil, and gasoline
- PAHs
- BTEX
- Metals (arsenic, cadmium, chromium, copper, lead, and zinc)
- Miscellaneous SVOCs (4-methylphenol, butyl benzyl phthalate, di-n-octyl phthalate, and dibenzofuran)

The above COI were approved by Oregon DEQ, as presented in the RI Workplan.

4 INVESTIGATION AND CLEANUP HISTORY

4.1 Historic Releases and Cleanup Actions

4.1.1 McCall Site

During the period 1955 to present, MOCC and the previous owner, Douglas Asphalt, kept careful records of accidental releases that occurred during industrial operations. MOCC releases related to the Marine Terminal and asphalt plant are documented on Table 1. Great Western Chemical Company also documented historic releases, as shown on Table 2.

Review of Tables 1 and 2 show that most of the releases at the McCall Oil Terminal and the asphalt plant consisted of petroleum products, including diesel, raw asphalt, and bunker C. The table also shows the action taken to clean up each release. Most of the releases at the Great Western Chemical operations were various acids.

The GWCC release history includes a 1992 release of copper-chrome-arsenic (CCA) that occurred at the CCA process area of the GWCC plant. In cooperation with DEQ, excavation and off-site landfill disposal of CCA contaminated soil was completed. The details of the CCA soil cleanup are in Appendix D of the RI Workplan. Monitoring wells MW-1, 2, 3, and 4 were installed to assess possible groundwater quality impacts from the CCA release. These wells were later used in the upland RI.

The Site release history and the locations of key industrial processes were primary factors in the design of the upland RI.

4.1.2 Tube Forgings

Bunker C fuel was released from an underground storage tank on the Tube Forgings plant site. During the McCall RI, bunker C nonaqueous phase liquid (NAPL) was detected adjacent to the Tube Forgings property at the location shown on Figure 5. This is the only petroleum NAPL detected on the McCall Site.

Cleanup of the underground storage tank bunker C release occurred on the Tube Forgings property, and the cleanup is documented in the Groundwater Investigation Report, Front Avenue LLP Site (Maul, Foster, Along, Inc., 2004). However, soil and groundwater data from the McCall RI Geoprobe borings and monitoring wells shows that a zone of bunker C NAPL exists on the McCall Asphalt plant property adjacent to the location of the former bunker C underground storage tank (UST) on the Tube Forgings property. Forensic analysis conducted during the McCall RI confirms that the light non-aqueous phase liquid (LNAPL) adjacent to the Tube Forgings property line is bunker C. The LNAPL footprint is not connected to any of the McCall fuel storage facilities.

However, the McCall RI data indicate the bunker C NAPL is not migrating, and will not migrate to the Willamette River. The location of the bunker C NAPL is approximately 700 feet from the river shoreline, is not considered a future threat to Willamette River beneficial uses, and will only be further evaluated with respect to potential human health risk to site workers or future utility workers.

4.1.3 Willbridge Terminal

Since at least the early 1970s, floating petroleum hydrocarbon products, primarily diesel, with some gasoline, have discharged to the Willamette River along the backfill of the former wood stave Doane Avenue stormsewer and along the backfill of the 1982 City of Portland replacement concrete stormsewer (current City outfall 022). The stormsewer and outfall 022 are located on Conoco/Phillips property within a few feet of the western Site property line. The City stormsewer outfall 022 location is shown on Figures 4, 5, and 6.

From the 1970s through the present, various oil companies have conducted free product recovery cleanup actions where the City stormsewer outfall 022 discharges to the river, just west of the Site. The 2006 photo on Figure 4 shows the location of City outfall 022 in relation to the Site property line and the Site stormwater outfall.

Historic petroleum product releases have occurred on the Chevron Asphalt and Conoco/Phillips tank farms located upgradient from the Site. The petroleum free product has migrated along the City stormsewer backfill to the river. Free product recovery efforts have been conducted on both sites. Dissolved petroleum hydrocarbon plumes exist on both sites.

The current and historic petroleum free product discharges to the river at City stormsewer outfall 022 are relevant to this report because several of the LWG river sediment sampling sites were located very close to the floating petroleum collection booms in the river. As will be discussed later in this report, petroleum-related COIs detected by LWG at sediment sample locations G401, G404, C532, and G399 may be at least partially sourced from the adjacent historic free product discharges in this area of the shoreline.

4.2 McCall Upland Preliminary Assessment and Groundwater Assessment

At DEQ's request, MOCC conducted a 1993 Preliminary Assessment (PA) at the Site, including the MOCC and GWCC facilities. The assessment included a comprehensive review of historic site industrial operations, inventory of historic release records, and identification of potential data gaps for further assessment. The findings of the PA are described in the *Preliminary Assessment of McCAll Oil & Chemical Corporation and Great Western Chemical Company* (Emcon Northwest, Inc. April 5, 1994).

Following the PA, MOCC conducted a preliminary groundwater investigation that included the installation of monitoring wells EX-1 through EX-7. These wells are shown on Figure 5 and were later used in the upland RI. Groundwater quality data obtained during the 1990s from these wells is reported in the 2004 RI report.

4.3 McCall Upland Remedial Investigation

The McCall upland RI Workplan was designed to assess documented upland release locations to determine the nature and extent of groundwater and soil contamination downgradient of each of the suspected upland source areas. Each of the reported releases listed on Tables 1 and 2 were considered in the development of the RI Workplan.

Monitoring wells MW-1 through 5 and EX-1 through 7 existed at the site before the RI began.

As part of the RI, 63 Geoprobe borings were installed at locations designed to assess all of the suspected upland source areas identified in the release records and based on the locations of key industrial processes. The locations of the RI Geoprobe borings and monitoring wells are on Figure 5. Soil samples and groundwater grab samples were obtained at the Geoprobe boring locations. The soil and groundwater samples were tested for the COI identified in Section 3.

The RI also included sampling of MOCC and GWCC stormwater and catch basin sediment, with laboratory testing for relevant COIs.

The soil and groundwater data from the Geoprobe borings, in conjunction with groundwater data from the existing monitoring wells, was used to site additional monitoring wells. During the RI, monitoring wells MW-6 through 15 were installed to completely characterize groundwater quality at the Site. Table 3 describes the rationale for selecting groundwater COIs for testing at various wells and Geoprobe borings based on suspected upland source areas.

The RI groundwater and stormwater data have been screened against relevant criteria to assess potential impact to the river. The screening results are presented in Section 7.

4.4 LWG In-Water Remedial Investigation

The LWG is currently conducting the in-water Portland Harbor RI under an Agreed Order on Consent (AOC) with EPA Region X. The in-water RI has included sampling of sediment adjacent to the Site and adjacent properties owned by Front Avenue LLP and the Willbridge terminal owners. Figures 5, 6, and 7 show LWG sample locations adjacent to the Site, Front Avenue LLP, and Conoco/Phillips properties. The river stormwater outfall locations are also shown on Figure 6.

Figure 7 shows the LWG Round 2A sediment sample sites for a distance of approximately ½ mile upstream and downstream from the Site. The sediment sample locations on Figures 5, 6, and 7 are estimated based on maps in the Round 2A Sediment Site Characterization Summary Report Map Folio (Integral, 2005).

The in-water RI has included sediment chemistry and toxicity testing. The findings from that testing are discussed in Section 5.

5 LWG FINDINGS

5.1 Sediment Chemistry

LWG Round 2 included eight sediment sample locations adjacent to the Site, as shown on Figure 6. The upstream boundary of the Site with Tube Forgings, LLP is at approximate river mile 8.03 and the downstream boundary of the Site with Conoco/Phillips is at approximate river mile 7.8. Table 4 is a list of all the sediment sample sites, including those within approximately ½ mile upstream and downstream of the Site boundaries. The sample sites listed on Table 4 are shown on Figure 7.

Table 4 shows that the following eight LWG sediment sample sites are adjacent to MOCC and GWCC, in order from upstream to downstream:

- G413, C413
- G410
- G407
- G403, C403
- G399
- G391
- C532
- G404

The sample numbers with the G prefix are surface samples obtained within the upper 10 cm of the mudline, and those with the C prefix are subsurface core samples obtained from various deeper intervals.

The LWG sediment samples were tested for a wide range of target analytes, some of which are also COIs in the MOCC Site upland RI. To assess the results of LWG sediment chemistry testing, the concentrations of the following eight Site COIs were plotted on Figures 8.1 to 8.8.

- Figure 8.1 – LPAH (total)
- Figure 8.2 – HPAH (total)
- Figure 8.3 – Arsenic
- Figure 8.4 – Chromium
- Figure 8.5 – Copper

- Figure 8.6 – Zinc
- Figure 8.7 – Dibenzofuran
- Figure 8.8 – 4-methylphenol
- Figure 8.9 – Butylbenzyl phthalate
- Figure 8.10 – Di-n-octy phthalate

In addition, Figure 8.11 is a plot of total PCB concentrations. PCBs are not a Site COI, but because PCBs are a key COI for the Portland Harbor, and because PCBs were detected in samples adjacent to the Site, as well as upstream and downstream of the Site, this constituent warranted further evaluation.

5.1.1 Downstream Trends in Concentration

Figure 8 plots the concentration of each COI in μg/kg on the vertical axis versus the sample location in approximate river miles. The LWG samples within 1/2 mile upstream and downstream of the Site along the left bank of the river are plotted; those samples located adjacent to the Site are indicated on each graph. Each of the sample locations plotted on Figure 8 and listed on Table 4 can also be found on the sample location map, Figure 7. The plots are oriented with upstream samples to the right and downstream samples to the left on each graph.

Beginning with Figures 8.1 and 8.2, the total LPAH and HPAH concentrations of the samples adjacent to the Site have significantly lower concentrations than the samples obtained upstream and downstream of the Site. The total LPAH and HPAH concentrations of the samples adjacent to the Site are all well below the overall mean concentration of all of the Portland Harbor LWG surface samples, and most are below the median concentration of the LWG Harbor-wide surface samples. The mean and median concentrations for all of the LWG surface samples were obtained from Table 4.1 in the Round 2A Sediment Site Characterization Summary Report (Integral, 2005).

The arsenic concentrations on Figure 8.3 are generally about the same as the upstream and downstream samples. The arsenic concentrations for the samples adjacent to the Site are below the LWG overall harbor-wide mean of 4.2 mg/kg in half the samples and are above the harbor-wide median of 3.7 mg/kg in six of eight samples. It should be noted that arsenic concentrations for the site and upstream and downstream samples are all in a fairly consistent narrow range of concentrations between 1.9 to 5.4 mg/kg.

Chromium concentrations on Figure 8.4 are generally at or lower than the upstream and downstream samples. The chromium concentrations for the samples adjacent to the Site are typically above the LWG overall harbor-wide mean of 32 mg/kg and the harbor-wide median of 31 mg/kg consistent with both upstream and downstream sample results.

The copper concentrations on Figure 8.5 are generally lower than the upstream samples, and about the same as the downstream samples. The copper concentrations for the samples adjacent to the Site are all below the LWG overall harbor-wide mean of 53.8 mg/kg, and four of the samples are below the harbor-wide median of 39.1 mg/kg.

The zinc concentrations plotted on Figure 8.6 are lower than both the upstream and downstream samples and all but one sample have zinc concentrations below the overall harbor-wide mean concentration of 139 mg/kg.

The dibenzofuran concentrations plotted on Figure 8.7 are lower than both the upstream and downstream samples. All eight of the samples adjacent to the Site have concentrations well below the harbor-wide mean of 283 μg/kg, and all but three samples have dibenzofuran concentrations below the overall harbor-wide mean concentration of 4.4 mg/kg.

The 4-methylphenol concentrations on Figure 8.8 are generally lower than the upstream samples, and somewhat higher than the downstream samples. All but one of the samples adjacent to the Site have concentrations well below the harbor-wide mean of 77.9 μg/kg, and three are below the harbor-wide median of 16 μg/kg.

The butylbenzyl and di-n-octy phthalate concentrations of samples adjacent to the Site were mostly below detection limits, and the few detections were all well below the harbor-wide median concentrations.

Figure 8.11 shows that total PCB was detected in all of the LWG surface sediment samples tested between river miles 7.5 and 8.5. The concentrations measured in samples adjacent to the Site were all well below the harbor-wide mean 216 μg/kg, and all but three of the samples were below the harbor-wide median of 29 μg/kg. Eight of the ten samples obtained upstream of the Site had concentrations exceeding the harbor-wide median, and two of the samples exceeded the harbor-wide mean. Three of the seven samples downstream of the Site had concentrations exceeding the harbor-wide median and one sample exceeded the harbor-wide mean.

5.1.2 Risk-Based Screening of Bulk Sediment Concentrations

The sediment samples listed above were compared to risk-based screening levels to determine whether and to what extent the sediments adjacent to the Site may be toxic to aquatic organisms. Because risk-based sediment quality criteria are still under review and development for the Portland Harbor, several different screening levels were considered in this analysis to provide a consensus-based approach to the screening evaluation.

- **Windward et al. 2006 (Draft).** These draft sediment quality guidelines, developed using bioassay testing results for the Portland Harbor, are still undergoing agency review. The biological endpoints considered were *Chironomus* growth, *Chironomus* mortality, a pooled *Chironomus* endpoint, and *Hyalella* mortality. The *Hyalella* growth and pooled *Hyalella* endpoints were not used because they showed inferior performance and reliability, and weak or no correlation with contaminant concentrations. The lowest and second lowest of the Level 1 Floating Percentile Method (FPM) values were preferentially used in this analysis. If FPM values were not available for certain constituents, Apparent Effects Threshold (AET) values were used as secondary guidelines.
- **WDOE 2003.** The Washington State Department of Ecology (WDOE) developed preliminary freshwater sediment quality guidelines. The biological endpoints considered in this analysis were *Chironomus* growth, *Chironomus* mortality, and *Hyalella* mortality. The Microtox endpoint was not used because it has questionable relevance to ecological receptors, and because EPA excluded Microtox bioassays from the development of sediment quality criteria in the Commencement Bay Superfund Site. The lowest and second lowest freshwater

AET values (LAET and 2LAET, respectively) from this recent WDOE study are listed in Table 4.

- **McDonald et al. 2000.** The consensus-based PEC from this study were also used to evaluate LWG data. The PEC values represent a compilation of existing literature values for sediment quality criteria from various regions of the USA and Canada. Threshold Effects Concentrations (TEC) were not used because they exhibit unreasonably high false positive error rates and low reliability (Windward et al. 2006).

The three sets of screening criteria are listed in Table 4. All of the criteria are in reasonably good agreement with each other, although the PEC values for several metals (chromium, copper, and zinc) are somewhat lower than the other guidelines. The lowest and most stringent of all criteria are indicated in the table.

None of the sediments adjacent to MOCC and GWCC exceed any of the listed sediment quality guidelines. In fact, many of the sediment concentrations are one to two orders of magnitude lower than the guidelines. Based on this analysis, Site sediments would not be expected to cause toxicity to benthic organisms. This prediction is confirmed by the results of sediment bioassay tests, as discussed below.

5.2 Sediment Toxicity

This section discusses the results of bioassay testing of river sediment samples obtained near the Site. LWG conducted bioassay tests on sediment samples G401, G403, and G413. In summary, none of the three samples showed any significant biological effects to *Chironomus* growth or survival or *Hyalella* survival, and therefore there is no indication that these sediments exhibit toxicity to benthic invertebrates or to the invertebrate prey base of upper level organisms such as salmonids.

Below is a brief description of the freshwater bioassay performance standards and endpoints used in the biological testing program.

- **Freshwater Amphipod Bioassay.** This bioassay measures the survival of amphipods (*Hyalella azteca*) after a 28-day exposure to the test sediment. Although this bioassay also has a growth endpoint, the growth endpoint was shown to respond primarily to the physical characteristics of the sediment (e.g., percent fines and ammonia) and to have low reliability in predicting toxicity (Windward et al. 2006); therefore, this endpoint was not included in the analysis.

- **Freshwater Midge Bioassay.** This test measures the survival and growth of the midge *Chironomus tentans* after a 10-day exposure to the test sediment.

The response of bioassay organisms exposed to the tested material representing each sediment unit is compared to the response of these organisms in control treatments, given that freshwater reference sites are not yet available in the region. The LWG in consultation with EPA established three levels of biological effects:

- "No Effects" (Level 1): Greater than 90 percent of control survival or growth
- "Low Effects" (Level 2): Greater than 80 percent of control survival or growth
- "Moderate Effects" (Level 3): Greater than 70 percent of control survival or growth

These biological effects levels (Levels 1, 2, and 3) are based on statistically significant differences between the test sediment and control sediment as well as exceedence of the minimum difference thresholds.

The three sediment samples chosen by LWG to perform bioassays appear to be representative of the full range of PAH concentrations detected across the Site. The samples selected are G401, G403, and G413. G401 is located adjacent to Conoco/Phillips property near City stormwater outfall 022, just past the downstream boundary of the Site, as shown on Figures 6 and 7. The test results are shown on Tables 5.1, 5.2, and 5.3.

***Hyalella* Bioassay.** The *Hyallella* bioassay control had an acceptable absolute mean mortality of 1.25 percent. *Hyallella* mortality in the test sediments G401, G403, and G413 is 3.75 percent, 3.75 percent, and 1.25 percent, respectively (Table 5.1). Each test response is less than 10 percent over the control mortality, therefore, the test sediments exhibited no significant biological effects at the most stringent "No Effects" level for the *Hyalella* mortality endpoint.

***Chironomus* Bioassay.** The *Chironomus* bioassay control had an acceptable absolute mean mortality of 5 percent and an acceptable growth performance greater than 0.6 mg minimum mean weight per organism. Table 5.2 shows that each of the test sediments had less than 10 percent mortality over the control mortality and therefore the test sediments exhibited no significant biological effects at the most stringent "No Effects" level for the *Chironomus* mortality endpoint. Table 5.3 shows that each of the test sediments had less than 10 percent reduction in growth over the control sediment, and therefore the test sediments exhibited no significant biological effects at the most stringent "No Effects" level for the *Chironomus* growth endpoint.

6 UPLAND SOURCES

6.1 McCall

6.1.1 Groundwater Occurrence

On the basis of soil and bedrock samples obtained from the GeoProbe and monitoring well borings drilled during the upland RI, there are three geologic units of interest underlying the uplands at the Site. The uppermost geologic unit is dredge fill derived from the Willamette River. The dredge fill overlies river alluvium. The dredge fill was placed in the 1960s by the Port in the area where McCall later built the marine terminal above-ground tank farm. The alluvium overlies basalt bedrock. The combined thickness of the dredge fill and alluvium is approximately 75 feet, based on the depth to basalt bedrock at borings GP-41, 42, 43, and 44. Because the dredge fill and alluvial sediments both consist primarily of fine to medium sand and silt, the contact between the two units is difficult to identify in borings.

Logs from site borings have not identified a consistent lithologic boundary between the dredge fill sediments and the underlying alluvial sediments. Both units are quite sandy and contain silty-sand or silt interbeds. Although some boring logs indicate that the underlying alluvium is siltier than the dredge fill sediments, the water level data do not indicate that groundwater in the dredge fill is consistently perched on the underlying alluvium. For these reasons the dredge fill sediments and alluvial sediments are considered to be one hydrogeologic unit. For the purpose of this report the dredge fill and alluvium are termed the alluvial aquifer.

Five subsurface geologic cross sections are on Figures 6A through 6E in Appendix A. The cross sections are from the 2004 RI report. The section locations are shown on Figure 5 of this report. The sections identify the type of soil encountered in the GeoProbe and monitoring well borings. Section B-B′ on Figure 6B also shows the full thickness of the alluvial aquifer down to basalt bedrock.

On a regional basis, the Willamette River is the discharge boundary for shallow and deep groundwater. For this project we are concerned primarily with characterizing the groundwater flow system in the alluvial aquifer overlying basalt bedrock. The properties of the COIs and water quality data collected to date indicate that only groundwater in the upper portion of the alluvial aquifer has water quality impacts. The organic COIs that have been detected in site groundwater have specific gravities less than one, except the chlorinated VOCs. Therefore, we expect to encounter those light COIs in groundwater in the upper portion of the alluvial aquifer. Four borings were drilled to bedrock in the chlorinated VOC plume to look for evidence of chlorinated VOC dense non-aqueous phase liquid (DNAPL). Groundwater from those borings was tested for chlorinated VOCs from multiple depths down to bedrock. No evidence of DNAPL was detected. The results from those borings, GP-41, 42, 43, and 44 were reported in the April 2001 Focused RI Interim Status Report.

Groundwater potentiometric surface contour maps were prepared for March and October 2002 (Figures 9 and 10, respectively). The contour patterns on these maps indicate that groundwater in the alluvial aquifer flows northeast to the Willamette River. Comparison of the groundwater elevations shown next to the monitoring wells on Figures 9 and 10 indicates that there was up to 2 feet of difference in groundwater elevation between the October dry season and March wet season conditions. The flow pattern did not change significantly from the dry to wet season in 2002.

Because most of the Site is paved, groundwater in the alluvial aquifer is recharged primarily by underflow from areas to the south (Tube Forgings) and to the west (Chevron Asphalt and Willbridge terminals). The entire facility is paved, with two exceptions. The rectangular shaped area between the Quadra Chemical facility and the McCall Marine Terminal has a gravel surface. Although it is unpaved, vehicle traffic has compacted the gravel and the resulting low permeability causes rainfall to runoff to the catch basins in this area. Stormwater from those catch basins flows to the McCall terminal oil water separator located at S-4. The area within the McCall terminal above-ground tank farm is also unpaved. Some infiltration may occur in this area, although much of the rainwater that falls into the tank farm runs off and is routed to the oil water separator at S-4. The alluvial aquifer is also temporarily recharged near the shoreline when the Willamette River rises due to daily tidal, storm, and seasonal fluctuations.

The hydraulic conductivity of the alluvial aquifer was determined by field testing at monitoring wells EX-5, MW-6, and MW-7. A time lag method was used for these tests at the suggestion of DEQ. This method uses the time lag between river level fluctuations and the river induced groundwater level fluctuations to determine the alluvial aquifer hydraulic conductivity. The data and results of the field tests were reported in the July 15, 2002 Status Report. The horizontal hydraulic conductivity values determined for the three wells were 0.005 ft/minute for MW-6, 0.003 feet/minute for EX-5, and 0.16 feet/minute for MW-7.

6.1.2 Groundwater Quality

The groundwater quality data from the first phase of the RI was provided in the April 30, 2001 Interim Status Report. That report used tables and maps to display the range of COPC concentrations that had been detected in GeoProbe groundwater grab samples and in groundwater samples from the site monitoring wells. A primary purpose of that data analysis was to use the GeoProbe groundwater quality data to identify areas where monitoring wells should be installed. Based on the GeoProbe data the supplemental RI included the installation of monitoring wells MW-6 through MW-13.

This section describes the general occurrence and concentration time trends of the primary COI groups: TPHs, PAHs, SVOCs, VOCs, and metals. When reviewing the tabulated water quality data, note that detections are shown in bold.

Total Petroleum Hydrocarbons

The data on Table 6 show that petroleum hydrocarbons have been detected at least once in every monitoring well at the site with the exception of newly installed monitoring well MW-15. The TPH detections have been in the gasoline, diesel, and heavy fuel oil ranges. The groundwater concentrations for each hydrocarbon range are generally less than one mg/l, but since RI monitoring began in 2000, wells MW-1, MW-3, MW-4, MW-7, MW-8, MW-11, MW-12, and MW-13 have had concentrations exceeding 1 mg/l.

Wells MW-11 and MW-8 have the highest TPH concentrations.

A petroleum LNAPL has been detected in the vicinity of well MW-11. Forensic testing has identified the LNAPL as a residual bunker C or diesel fuel. The LNAPL was also detected in GeoProbe borings GP-31, 45, 46, 47, 54, 55, 56, and 59 near well MW-11. The LNAPL was not detected in GeoProbe borings GP-57, 58, 60, 61, 62, and 63, which were advanced to delineate the onsite extent of the plume. The estimated footprint of the LNAPL plume on McCall property was defined using the GeoProbe boring results and the estimated boundary is shown on Figure 5. Review of the Tube Forgings UST file shows that a bunker C release occurred near the McCall property boundary with Tube Forgings. The shape and location of the LNAPL plume on McCall property, shown on Figure 5, implies that the plume extends onto the Tube Forgings property. The forensic evidence, LNAPL location, and geometry all indicate that the LNAPL is sourced from the bunker C release on Tube Forgings property.

At well MW-8, petroleum hydrocarbons were logged in sand at a depth of 30 feet below ground surface (bgs) when the well was being installed, but LNAPL has not been detected during subsequent sampling of the well. This well is adjacent to the marine terminal above-ground tank farm, so the tank farm is a potential source for the hydrocarbons detected in well MW-8. There is no record of a specific release that occurred in the northwest corner of the tank farm. However, there is a surface depression in this corner of the tank farm, several feet below the surrounding grade; the depression has been observed to pool runoff water, which could subsequently infiltrate beneath the berm of the tank farm. Documented releases in the marine terminal tank farm were identified on Table 1.

Time trends of total TPH concentrations in groundwater have been plotted for the monitoring wells and are located in Appendix A. For the oldest wells, the TPH data go back as far as 1994. These plots do not show any discernible trends (either downward or upward) in TPH groundwater concentrations over time. For most of the wells the total TPH concentrations vary within the range of 0.1 to 1 mg/l. For the newer wells, such as MW-8, the period of record is too short to draw any significant conclusions.

PAHs

The data on Table 7 shows that PAHs have been detected in all site monitoring wells. The PAHs are components of the petroleum hydrocarbons in groundwater described in the previous section. Table 7 shows that the LPAH and HPAH compounds have been individually quantified for this investigation. The table also shows the total LPAHs and HPAHs concentrations for each well at each monitoring event.

The PAH concentrations in groundwater are generally at the trace level or extremely low, with total LPAH and HPAH concentrations less than 1 μg/L at all wells except MW-6, 8, 9, and 11. The highest concentrations of PAHs are in wells MW-8 and MW-11, which is consistent with the elevated petroleum hydrocarbon detections in those wells.

Maximum and average benzo(a)pyrene (BAP) concentrations in groundwater are displayed next to the site wells on Figure 11. Benzo(a)pyrene has not been detected in all monitoring wells. The concentrations in Figure 11 are further discussed in the groundwater risk screen analysis in Section 7. For those locations where BAP was not detected, a concentration equal to one half of the method detection limit is shown as the average concentration.

Time trend plots of total LPAH and HPAH concentrations are in Appendix A. Concentrations of the LPAHs and HPAHs seemed to generally increase between the October 2001 and March 2002 events, but there was no general concentration trend from March 2002 to February 2004.

SVOCs

Four SVOCs are COIs for this Site, 3- and 4-methylphenol (co-elution), dibenzofuran, butyl benzyl phthalate, and di-n-octyl phthalate. The SVOC groundwater quality data are on Table 7.

Trace concentrations of 3-and 4-methylphenol were detected in wells EX-2, EX-3, EX-5, and MW-6. Wells MW-8 and MW-12 had concentrations between 1 and 2 μg/L and well MW-13 had a concentration of 28 μg/L. That concentration at MW-13 was measured in the first sample obtained following installation of well MW-13. The concentrations were 1.5 and 0.4 μg/L for the later March and October 2002 samples, so the 28 μg/L concentration is not considered representative.

Trace concentrations of dibenzofuran were detected in MW-8, MW-11, and MW-13.

Trace concentrations of butyl benzyl phthalate were detected in wells EX-7, MW-1, MW-5, MW-8, MW-9, and MW-10. There were no detections of di-n-octyl phthalate in groundwater.

VOCs

Table 8 shows all of the VOC groundwater quality data obtained at the site since 1994.

Two areas of chlorinated solvent groundwater contamination are shown on Figure 12. The average and maximum concentrations of representative VOC compounds are displayed at each Figure 12 well location. Those compounds are further discussed as part of the risk screen analysis presented in Section 7.

The largest area of contamination represents a plume that originates near well EX-1 in the former solvent drumming area and extends downgradient to wells MW-7 and MW-8 near the river. The plume trend and geometry is consistent with a source area near EX-1 and a northerly groundwater flow direction. The location of the plume boundary is estimated from the groundwater quality data from the monitoring wells and GeoProbe groundwater grab samples. The GeoProbe data are also in Table 8. The VOC compounds and concentrations that occur in the downgradient wells near the river are consistent with the degradation products that would be expected from breakdown of the VOC compounds in wells EX-1 and MW-6.

The second area of contamination includes monitoring wells MW-1, 2, 3, 4, and 10. This area of contamination may be a plume that has developed from a single source, or it may represent commingled plumes from multiple sources. The combination of VOC compounds at each well, their concentration, and the well locations suggest that more than one source, including an off-site source, may be involved. The VOCs at MW-10 may be sourced from offsite because MW-10 is located upgradient of any known on-site source areas. PCE has not been detected at well MW-10, but is present in wells MW-1 and MW-2, suggesting that the contamination at MW-10 is from a different source. The concentrations and types of VOC compounds at MW-3 and MW-4 suggest that they are degradation products of the VOCs that are found in wells MW-1 and MW-2.

BTEX compounds were also detected at very low concentrations in well MW-11. Other than a few trace level detections of toluene at monitoring wells EX-3, MW-1, MW-7, and MW-12, this monitoring well is the only one on site with detections of BTEX compounds, another indication that the LNAPL at this location is sourced from off site.

Metals

Monitoring wells MW-1, 2, 3, 4, and 5 were installed in 1993 as part of the 1993 cleanup of the former CCA formulation facility that operated from 1984 to 1986 at the Chemax portion of the former Great Western Chemical Corporation. That cleanup was reported in the *Great Western Chemical Company, Technical Center Facility, 5700 NW Front Avenue, Portland, Oregon Soil Cleanup and Groundwater Monitoring Report*, prepared for Great Western Chemical Company, March 31, 1994, by EMCON Northwest, Inc. That report was also provided to DEQ as Appendix L to the Preliminary Assessment of McCall Oil and Chemical Company and Great Western Chemical Company, NW Front Avenue Properties, Portland, Oregon, ECSI ID #134, Volume 3, by EMCON Northwest, Inc., April 5, 1994.

For the first three groundwater RI sampling events, monitoring wells MW-1, 2, 3, 4, 6, 7, and 8 were tested for arsenic, chromium, and copper to determine the extent and concentration of residual CCA components remaining in groundwater near the former CCA facility. The metals data are on Table 9. Both total and dissolved metals concentrations were measured. All of the wells tested had detections of all three CCA compounds in total and dissolved forms. This is expected, since these metals naturally occur in shallow groundwater in Western Oregon (U.S. Geological Survey 1999). Well MW-1 had the highest average dissolved copper concentration of 280 µg/L. However, downgradient wells MW-4 and MW-7 had average dissolved copper concentrations of 0.8 and 1.0 µg/L, respectively. MW-1 also had the highest average dissolved total chromium concentration of 3.93 µg/L. Well MW-3 had the highest average dissolved arsenic concentration of 43.9 µg/L. Downgradient well MW-4 had an average dissolved arsenic concentration of 13.1 µg/L.

For the fourth groundwater monitoring event (February, 2004) DEQ requested that additional wells be tested for arsenic to help determine arsenic background concentrations. For that sampling round groundwater from the following additional wells was tested for total and dissolved arsenic: EX-1, EX-2, EX-3, EX-7, MW-5, MW-9, 10, 12, 14, and 15.

6.1.3 Stormwater and Catch Basin Sediment Quality

The stormwater quality and sediment quality data are summarized in the following tables. Detections are highlighted on the tables.

- Stormwater total petroleum hydrocarbons – Table 6
- Stormwater PAHs and SVOCs – Table 7
- Stormwater metals – Table 9
- Catch basin sediment total petroleum hydrocarbons – Table 10
- Catch basin sediment PAHs and SVOCs – Table 11
- Catch basin sediment metals – Table 12

The stormwater TPH data on Table 6 are somewhat inconsistent, with 1.1 mg/l gasoline detected at catch basin S-1 from the December 2000 sampling event, but no other hydrocarbons detected in S-1 in the December 2000 or March 2002 events. Gasoline was also detected at 0.13 mg/l at catch basin S-2 in the March 2002 sample, but no other hydrocarbons were detected in S-2 at that event or the December 2000 event. Gasoline and diesel were detected at outfall S-3 at 1.30 and 0.510 mg/l respectively in the 2000 event, but only diesel was detected in S-3 at 0.110 mg/l in the 2002 event. Gasoline and diesel were detected at outfall S-4 for both events; with concentrations ranging from 0.220 to 0.270 mg/l gasoline and from 0.280 to 1.30 mg/l diesel. Heavy fuel range hydrocarbons were detected at a concentration of 0.550 mg/l at S-4 in the April 2002 sample. The 10 mg/l oil and grease NPDES limit for the Quadra Chemical and McCall Oil stormwater permits were not exceeded at any of the sample points.

Very low concentrations of PAHs were detected in all of the stormwater samples tested from all four sample stations (Table 7). Very low concentrations of the SVOC target analytes 3-and 4-methylphenol, dibenzofuran, and butyl benzyl phthalate were also detected in the stormwater samples from all four sample stations. Di-n-octyl phthalate was not detected in any of the stormwater samples.

The target analyte metals were detected in all of the stormwater samples tested (Table 9). The NPDES stormwater permit limits for copper (0.1 mg/l), lead (0.4 mg/l), and zinc (0.6 mg/l) were not exceeded in any of the samples.

Gasoline, diesel, and heavy fuel oil range hydrocarbons were detected in the sediment samples obtained from catch basins S-1, 2, and 3 (Table 10). A sediment sample was not obtained for testing from station S-4, since the oil/water separator is designed to capture stormwater sediment and prevent sediment release to the river. A trace detection of heavy fuel oil range hydrocarbons was detected in the river sediment sample S3-01C.

PAHs were detected in the sediment samples obtained from stations S-1, 2, 3, and S3-01C (Table 11). All of the target SVOCs except di-n-octyl phthalate were detected in the sediment samples from catch basins S-1, 2, and 3. A trace concentration of di-n-octyl phthalate was detected in the river sediment sample from station S3-01C.

All target metal analytes were detected in the three catch basin sediment samples S-1, 2, and 3, and in the river sediment sample, S3-01C.

6.2 Front Avenue, LLP

6.2.1 Groundwater

As described in Section 6.1.2, bunker C NAPL has been mapped at Site monitoring well 11, adjacent to the Tube Forgings LLP facility. There was a historic release of bunker C from an UST on the Tube Forgings property, and the NAPL is believed to be sourced from that release. The NAPL boundaries were determined using Geoprobe borings during the RI. The boring locations and NAPL boundary are on Figure 5. The borings were also used to determine if the NAPL is migrating along potential utility backfill pathways, and no NAPL was detected outside of the plume boundaries shown on Figure 5. The bunker C NAPL is about 700 feet from the river shoreline, does not appear to be migrating, and is not believed to be a threat to the river.

6.2.2 Stormwater

There are three private stormwater outfalls on the shoreline near the boundary of Front Avenue LLP property and McCall property. These outfalls apparently receive stormwater from the three properties currently owned by Front Avenue LLP, including Glacier Northwest, Tube Forgings, and CMI Northwest. All three of these private outfalls are just upstream from LWG sediment sample location G413, as shown on Figure 6.

6.3 Willbridge Groundwater

As described in Section 4.1.3, petroleum NAPL has been discharging along groundwater and utility backfill pathways into the river near the Willbridge terminal docks since the 1970s. Conoco/Phillips and other Willbridge owners have been conducting free product recovery operations along the shoreline, particularly near City stormwater outfall 22, as shown on Figures 4 and 6.

6.4 City Portland Stormwater

As shown on Figure 6, the City of Portland operates regional stormwater outfall 22 located just downstream of the McCall/Unocal property line.

7 MCCALL RISK SCREENING EVALUATION

A risk screening evaluation has been performed as part of the Site upland RI. Of particular focus in this report are the potential for direct effects to aquatic organisms in the Willamette River, and the potential for bioaccumulative effects to humans and upper-level wildlife species that consume fish and shellfish from the river. The Site RI also included a risk screening evaluation of soil and groundwater data to identify potential concerns to upland site workers via soil and groundwater contact, inhalation of dust and volatiles, and related upland exposure pathways. Because the risk screening evaluation to upland Site workers is not relevant to river beneficial uses, it is not included in this report.

7.1 Groundwater Screen

Shoreline monitoring wells at the McCall site were screened against surface water quality criteria for protection of aquatic life in the Willamette River. Shoreline monitoring wells include EX-2, EX-3, EX-5, MW-5, MW-7, MW-8, and MW-14. These wells were sampled during several groundwater monitoring events between December 2000 and October 2004.

The quality of shoreline groundwater was screened against ambient water quality criteria for protection of aquatic life in the Willamette River, including the chronic water quality criteria presented in the Portland Harbor Joint Source Control Strategy (JSCS) augmented with updated criteria where appropriate (i.e., EPA 2003). In particular, the following screening levels were used to assess potential impacts to the Willamette River from groundwater discharges at the McCall site (see Table 13):

- **Chronic Water Quality Criteria per JSCS.** Chronic metals criteria are derived from EPA 2004 National Recommended Water Quality Criteria, adjusted to a hardness value of 25 mg/l and expressed on a dissolved basis. Criteria for two PAHs (naphthalene and acenaphthene) two phthalates (butyl benzyl phthalate and di-n-octyl phthalate), and two VOCs (trichloroethene and tetrachloroethene) are from DEQ 2004 ambient water quality criteria, and the Tier II secondary chronic value for dibenzofuran is from Oak Ridge National Laboratory (Suter and Tsao 1996).
- **Final Chronic Values for PAHs are from EPA 2003.** The most recent and comprehensive ambient water quality criteria for PAHs were developed by EPA for the ultimate purpose of developing sediment benchmarks using the equilibrium

partitioning approach. Final chronic values for all PAH constituents are provided in Table 3-4 of EPA 2003.

Following is a summary of the groundwater screening evaluation.

- **PAHs.** All PAHs are below their respective chronic water quality criteria in shoreline groundwater at the McCall site.
- **Miscellaneous SVOCs.** The miscellaneous SVOCs listed as COIs at the McCall site are all below their respective chronic water quality criteria in shoreline monitoring wells.
- **VOCs.** All VOCs are below their respective chronic water quality criteria in shoreline groundwater at the McCall site, for those constituents for which water quality criteria are available (i.e., TCE and PCE). In fact, TCE and PCE were not detected in any of the shoreline monitoring wells at the Site.
- **Metals.** All dissolved metals concentrations are below their respective chronic water quality criteria in shoreline groundwater at the Site.

In summary, none of the constituents of concern in shoreline monitoring wells at the Site were above the chronic water quality criteria in any of the monitoring events. Therefore, groundwater discharges from the Site are expected to cause no direct toxicity to aquatic life in the Willamette River.

7.2 Stormwater Screen

Stormwater quality at the Site was sampled at four locations (S-1 through S-4) covering the various operational areas of the Site between December 2000 and April 2005 (see Table 14).

Stormwater quality was screened against ambient water quality criteria, including the chronic water quality criteria as recommended in the JSCS and presented in Section 7.1 above. Although EPA guidance states it is generally inappropriate to use chronic criteria to evaluate stormwater quality, due to the variable and intermittent nature of stormwater discharges that violate the basis of exposure for these criteria (i.e., continuous 4-day average exposure concentrations are not realized in stormwater discharges) (EPA 1996), chronic criteria are nevertheless used in our screening evaluation to be consistent with the JSCS and to provide an ultra-conservative, albeit unrealistic, assessment of stormwater quality at the McCall site.

This screening evaluation also considers naturally occurring background concentrations in the Lower Columbia River basin and ambient concentrations of contaminants in urban runoff from the Portland metropolitan area. Specifically, the following criteria were included in the stormwater screening evaluation (see Table 14):

- **Background Values for Metals in Lower Columbia River Basin.** Because of the typically low hardness in Willamette River water (i.e., 25 mg/l), hardness-based water quality criteria for several metals (copper, cadmium, lead, and zinc) are below naturally occurring background concentrations. Regional background concentrations for metals in the Lower Columbia River Basin were determined by the USGS (Fuhrer et al. 1996) and subsequently acknowledged in DEQ guidance (DEQ 2002).
- **Portland Ambient Urban Runoff Concentrations.** Metals and PAHs are common contaminants in urban runoff. For comparison purposes, mean concentrations of these constituents were calculated for the Portland metropolitan area using the City of Portland Bureau of Environmental Services database (dated January 30, 2004). Mean metals concentrations were calculated using monitoring data from a variety of urban land uses (i.e., residential, commercial, industrial, and transportation corridors) between 1991 and 2003. PAH data in the BES database are sparse. Mean PAH concentrations were calculated from stormwater influent to infiltration sumps sampled for the Underground Injection Control program. The City of Portland used a higher detection limit (0.1 μg/L) compared to the McCall data (0.01 μg/L), so several of the PAH constituents in the municipal data set are "censored" and mean concentrations could only be calculated for those constituents that had detected concentrations.
- **NPDES Stormwater Permit Limits.** McCall's stormwater discharges are currently regulated under the DEQ 1200-Z industrial stormwater permit. This permit contains water quality benchmarks for total copper, lead, and zinc.

Following is a summary of the stormwater screening evaluation.

- **PAHs.** All PAHs are below their respective chronic water quality criteria in stormwater at the McCall site, often one or more orders of magnitude below these criteria. In addition, the mean concentration of PAHs in McCall stormwater is similar to, if not better than, typical urban runoff in the Portland metropolitan area, including runoff not only from other industrial sites but also from lower impact land uses.
- **Miscellaneous (SVOCs.** The miscellaneous SVOCs listed as COIs at the McCall site are all below their respective chronic water quality criteria in stormwater at the Site, often one or more orders of magnitude below these criteria.
- **Metals.** Arsenic and chromium, two of the key metals of potential concern at the Site, are well below their respective chronic water quality criteria in stormwater. In a majority of cases, copper (six out of 10 samples), cadmium (three out of four samples), and lead (three out of four samples) are at or below natural background concentrations. In all cases, total copper, cadmium, lead, and zinc are lower than the mean concentrations in ambient urban runoff from the Portland metropolitan area. Copper, lead, and zinc concentrations are also well below the NPDES stormwater benchmarks for the site.

In summary, concentrations of PAHs, SVOCs, arsenic, and chromium are well below their respective chronic water quality criteria in all stormwater samples from the Site. Total copper, cadmium, and lead concentrations are near or below naturally occurring background values in a majority of samples. Zinc concentrations, although higher than background, are nevertheless lower than the mean zinc concentration in ambient urban runoff from the Portland metropolitan area, and well below the NPDES stormwater benchmark. Therefore, stormwater discharges from the Site are expected to cause negligible, if any, effects on aquatic life in the Willamette River, especially when due consideration is given to the intermittent and variable nature of stormwater discharges as well as mixing and dilution processes in the receiving water.

7.3 Bioaccumulation Screen

A key pathway of interest for the risk assessment in the Portland Harbor is the potential bioaccumulation of contaminants in fish and shellfish and subsequent risks posed to upper-level organisms such as humans that eat fish from the harbor, piscivorous birds and mammals, and risks to the fish themselves resulting from the body burden of contaminants in their tissues. It is well recognized in agency guidance that the assessment of bioaccumulation pathways must take into account appropriate scales of exposure in time and space (EPA 1991; EPA 2006).

Bioaccumulation exposures are averaged temporally over the lifetime of the fish being exposed to contaminants in the river, as well as the lifetimes of the human and wildlife receptors that are consuming fish from the river. Bioaccumulation exposures are also averaged spatially over the home range of the fish and the harvesting area of the receptors. For these reasons, application of bioaccumulation criteria at a specific point in space and/or a point in time, without consideration of these exposure scales, is inappropriate. Rather, the assessment must account for the cumulative effects of all contaminant inputs to the conditions in the receiving water body over the spatial and temporal scales of interest.

As a result, our assessment of the potential for stormwater and groundwater discharges from the McCall site to contribute substantively to bioaccumulation risk in the river is based on a comparison of average COI concentrations and flows at the site relative to other sources of contaminant loadings in and around the harbor, consistent with the key components of the "weight of evidence" evaluation described in the JSCS. In addition to average groundwater and stormwater COI concentrations from the McCall site, COI concentrations and flows are provided for municipal stormwater runoff and ambient upstream sources. Although stormwater and ambient upstream sources are expected to contribute a relatively large portion of metals and PAH loads, other industrial sources in and around the Portland Harbor may also be significant and should be incorporated as they become available. Concentration and flow data for these sources are summarized in Table 15.

Key inputs to the bioaccumulation assessment are described below:

- **McCall Stormwater Runoff Volume.** The McCall site covers 36 acres and includes roughly equal portions of pavement and gravel surfaces. A lumped runoff coefficient of 0.75 would therefore be appropriate for this site with an annual incident rainfall of 37 inches in the Portland area.

- **McCall Groundwater Discharge Volume.** The mean groundwater gradient in the shoreline area of the McCall site is 0.025 (range from 0.01 to 0.05) and the geometric mean hydraulic conductivity is 0.013 feet/minute (range from 0.003 to 0.16 feet/minute). The length of the shoreline is approximately 1,500 feet and the saturated thickness of the shallow water-bearing zone (i.e., in the fill sands overlying native alluvium) is approximately 10 feet.
- **Portland Municipal Stormwater Runoff Volume.** The City of Portland estimates 44,000 acres drains directly to the Willamette River in the metropolitan area, not including the tributary inputs from Johnson, Tryon, or Fanno Creeks, or the Columbia Slough (City of Portland 2004). An estimated 40 percent of this urban watershed (i.e., 17,600 acres) is covered by impervious surfaces. Our estimate of municipal stormwater runoff is based on the impervious surfaces only with an assumed runoff coefficient of 0.75.
- **Mean Annual Willamette River Discharge.** The mean annual discharge in the Willamette River from 1973 to the present is about 33,000 cfs, according to the U.S. Geological Survey (USGS) Portland gage #14211720 (http://waterdata.usgs.gov/nwis).
- **Stormwater, Groundwater, and River Concentrations.** Mean groundwater and stormwater concentrations at the Site are presented in Tables 13 and 14, respectively. Mean concentrations in Portland municipal stormwater from a variety of land uses (residential, commercial, industrial, and transportation) were calculated from the BES stormwater database (dated January 30, 2004). Ambient background concentrations of metals in the Lower Columbia River Basin are from the USGS (Fuhrer et al. 1996).

The results of the bioaccumulation assessment are described below.

- **Metals.** Naturally occurring volcanic soils in western Oregon contribute significant quantities of background metals to the Willamette River via erosion and runoff which are transported to the Portland Harbor at the base of the watershed. In addition, significant quantities of metals are conveyed in urban runoff from vehicle wear and exhaust, dry deposition on impervious surfaces, and various other urban sources. By comparison, the loadings from the Site are insignificant.

- **PAHs.** Significant quantities of PAHs are conveyed in urban runoff from vehicle exhaust, oil pan drippings, petroleum handling and spills in the drainages, deposition of particulate air pollutants, and various other urban sources. By comparison, the loadings from the Site are insignificant. Moreover, this does not account for other sources of PAHs to the harbor, in particular natural sources (e.g., forest fires, erosion of coal deposits), direct inputs from vessel traffic and marinas, combined sewer overflows, and discharges from other less-controlled industrial sites.

In summary, the total loadings of metals and PAHs from stormwater and groundwater at the Site would be negligible compared to other sources in and around the harbor, and thus McCall discharges provide an insignificant contribution to bioaccumulation risk in the Willamette River.

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Table 1

McCall Oil & Chemical Corporation
Summary of Historical Spill Releases – McCall

Spill No.	Dates	Material Released	Location	
1	1955-80	Medium cure (MC) products (containing kerosene distillates); Rapid cure (RC) products (containing petroleum naphthalene); stove oil; all used to manufacture asphalt cold-patch.	Douglas Asphalt Plant	Approximately 4 or 5 spill incidents involving 4,000 to 10,000 gallons per incident occurred in this area prior to the construction of the lube oil tank farm in 1982. Typically, the spilled product was recovered to the extent practicable, and the waste materials would be collected in 55-gallon metal drums and sent to St. John's Landfill.
2	Mid-1960's	MC-250; MC-products contain kerosene distillates; MC-250 is 25% stove oil and 75% paving-grade asphalt.	Douglas Asphalt Plant	Operator error during the routine transfer of MC-250 resulted in the release of approximately 8,000 to 10,000 gallons of MC-250 into the aboveground storage tank containment area at the Douglas MC plant. The MC-250 remained a homogeneous mixture as it quickly cooled and hardened. The usable material was recovered using jackhammers and shovels. Unusable spilled material was sent to the St. John's Landfill.
3	Mid-1970's	Oil and water	Marine Terminal Slop Tank	The slop tank valve was inadvertently left open and an unknown quantity of oil and water was released into the Willamette River.
4	1982	Lube oil	McCall Lube Oil Plant	The lube oil plant was constructed in 1982. During construction, a lube oil spill occurred resulting in the release of an unknown quantity of lube oil into the aboveground storage tank area. Lube oil was recovered to the extent practical using a vacuum truck.
5	1955-80	Re-refined oil	Marine Terminal Tanks 10 and 7	The re-refined oil line between tanks 7 and 10 in the McCall Terminal leaked as a hose was disconnected from a product-transfer truck, resulting in the release of a small quantity (<25 gallons) of oil onto the surrounding soil. All visibly stained soil was excavated and disposed in an off-site landfill. The oil was nearly solid at ambient temperature.

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Table 1

McCall Oil & Chemical Corporation
Summary of Historical Spill Releases – McCall

Spill No.	Dates	Material Released	Location	
6	Mid-1970's	Asphalt	Marine Dock	
7	Early-1980's	Bunker Fuel	Marine Terminal Tank 6	The bunker fuel tank (Tank 6) at the McCall Terminal was overfilled, resulting in the release of approximately 100 gallons of bunker fuel onto the surrounding soil. The spill was immediately cleaned up and all visibly stained soil was excavated and disposed at Hillsboro landfill.
8	1984	Bunker Fuel (#6 fuel oil, marine fuel or industrial fuel oil)	Asphalt Plant Tank 20	Approximately 800 barrels of bunker fuel was released at the McCall asphalt plant due to a tank manhole cover left open during tank filling operations. The Oregon DEQ was notified and cleanup operation were conducted by Environmental Pacific.
9	1985	Caustic soda	Asphalt Plant	Tanker truck at the former loading rack (currently the asphalt loading rack) contained caustic soda. Tanker truck overfill resulted in the release of approximately 60 gallons of caustic soda.
10	1989	Oil and water	Marine Terminal Slop Tank	The contents of the slop tank overflowed and an unknown quantity of oil and water was released onto the ground. Visibly impacted soils were removed immediately following the incident.
11	1989	Asphalt	Asphalt Plant Tank 24	Approximately 200 gallons of asphalt were inadvertently released from Tank 24. The spilled asphalt was collected using jackhammers and shovels and disposed of at an off-site landfill. Cleanup conducted by NW Field Services.
12	Unknown	Asphalt flux	Flintkote	Small shipments (i.e., 1-2 truckloads) of asphalt flux overfilled on several occasions. The quantity is estimated to be small, but occurred periodically. The material was cleaned up following each incident.
13	1991	Asphalt	Marine Dock	A hose barge burst during asphalt loading operations at the new marine dock resulting in the release of an unknown quantity of asphalt into the river.

Table 1

McCall Oil & Chemical Corporation
Summary of Historical Spill Releases – McCall

Spill No.	Dates	Material Released	Location	
14	1983	Water and emulsified asphalt	Marine Terminal	Emulsified asphalt was sprayed onto the soil berm surrounding the aboveground storage tank farm at the McCall Oil terminal to prevent berm erosion. Following the application of asphalt, rain ensued prior to the asphalt hardening, resulting in storm water discharge containing trace amounts of asphalt.
15	1991	Bunker Fuel	Asphalt Plant Railcar Loading Area	A railcar tank bleeder-valve handle was inadvertently opened during product transfer operations and approximately 20 gallons of bunker fuel was released onto the surrounding soil during a period of heavy rainfall. Absorbent pads were immediately placed on the standing water and soil impacted with bunker fuel. No subsequent soil excavation was required.
16	1975-82	Oil and Water	Marine Terminal Slop Tank	Two separate spills of diesel fuel from slop Tank 12 occurred during this period. Approximately 50 gallons of oil and water were released during each incident. While skimming the oil water separator, the operator left the skimmer unattended and overfilled a tank.
17	10/13/98	Diesel Fuel	Oil Water Separator	Oil and water Spill OERS No. 98-2471. Temporary blockage of outlet for new separator resulted in light sheen on river. Estimate less than 2 gallons of diesel.
18	11/19/99	Bunker Fuel	Rail tank car	Rail tank car overflow during offloading. Foss Environmental removed 11 drums soil and ballast. Estimated 85 gallons released.

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Table 1

McCall Oil & Chemical Corporation
Summary of Historical Spill Releases – McCall

Spill No.	Dates	Material Released	Location	
19	7/16/95	RFO Bunker Blend	Marine Terminal	A flange gasket cracked and split, allowing oil to seep by it under the pressure of the positive displacement pump. Estimated 50 gallons released and recovered.
20	1/12/90	Reclaimer motor oil	Lube tank farm area	A camlock fitting came loose during delivery pump off. Oil absorbent applied immediately. NW Field Services vacuumed standing oil, dug out oil, stained fill/absorbent. Estimated 200 gallons spilled onto area paved with asphalt and recovered.
21	8/10/90	Asphalt Mix Oil	Asphalt Plant/NW Front Avenue	Spill occurred as customer truck departed the facility. Product drained into storm drain on Front Avenue in sufficient volume to react with storm water and boil over.
22	10/4/2000	Bunker Fuel	Marine terminal near 10" flow meter	Spill occurred when the casing of a 10" flow meter failed. Pipeline pressure caused 250 to 300 gallons to spray on the ground near meter. Foss Environmental vacuum removed five 55 gallon drums of oil. Approximately 7.5 tons contaminated soil was removed and placed in a drop box for landfill disposal at ?

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Table 2

Great Western Chemical Corporation
Summary of Historical Spill Releases - GWCC

Number	Dates	Material Released	Location	Description
1	1988 or 1989?	H_2SO_4	On blacktop (drumming area)	A drum of H_2SO_4 split open. Spill was diked and cleaned up with sorbent material.
2	?	CO630 (surfactant)	Railcar loading area	Release during tank car offloading - cleaned up.
3	?	H_2SO_4	Acid tank farm	Valve apparently left open; quantity unknown, but spill contained within bermed area.
4	1987 or 1988?	H_2SO_4	Acid tank farm	Bottom of tank corroded, approximately 20,000 gallons spilled into bermed area. Acid was pumped into trucks and tanks were repaired and raised onto pads.
5	?	Rinsate	Drum rinse area	Rinsate from acid drum rinsing operations occasionally flowed onto unpaved area..
6	?	Calgon Cat-Floc	Technical Center railcar loading area	Several incidental spills, cleaned up and put into totes.
7	1990	1,1,9-Triethylamine	Portland Branch railcar loading area	Railcar leaked over the weekend in the loading area. Soil was tested by Hahn & Associates. No further action required. No detections. Amount of spill was below the reportable quantity limit.
8	1984 (?) - 1988	$CuSO_4$	$CUSO_4$ containment structure	Crack in the concrete $CuSO_4$ containment structure was discovered during decommissioning activities. Soil was overexcavated beneath the structure and soil and concrete were disposed of off-site at Chemical Waste Management hazardous waste landfill at Arlington, Oregon.
9	1984 (?) - 1989	CCA	CCA process area	A prior release was discovered in 1992 during excavation in the former CCA Process Area. Soil and concrete were excavated and confirmation samples were collected from the excavation. Concrete and soil were disposed of off-site at Chemical Waste Management hazardous waste landfill at Arlington, Oregon. Groundwater monitoring continues.
10	1/21/99	Sodium hydroxide (caustic soda)	Storage yard	Tote bin of caustic soda fell from forklift. Contents released onto asphalt pavement drainage ditch. Spill diked and fully contained; no release to land or water. All materials cleaned up. Estimated 2,000 lbs. of combined material and absorbent material.
11	4/28/93	Diesel Fuel	Parking lot	A distributor was operating a truck and backed over a stake on the RR grade, puncturing the diesel tank. Estimated 30 gallons was spilled onto asphalt-paved parking area. All materials thoroughly cleaned up – no release to land or water.

Table 2

Great Western Chemical Corporation
Summary of Historical Spill Releases - GWCC

Number	Dates	Material Released	Location	Description
12	3/26/96	Sulfuric acid	Acid loading rack	A driver was filling his tanker truck with no gauges, resulting in an overflow of product. Estimated 150-200 gallons was spilled in contained area. All materials cleaned up – no release to land or water.
13	6/24/99	Sulfuric acid	GWEM receiving dock	Drum slipped from drum pick, dropping 12-18". Drum split open; 55 gallons of product splashed onto receiving dock. Spill cleaned – no release to environment.
14	5/19/99	Sulfuric acid	GWEM warehouse	Drum slipped off the drum pick while being lifted causing release of 500 gallons of product onto floor. Spill cleaned – no release to environment.
15	4/26/00	Sulfuric acid	Tank farm	Contractor dropped pipe onto valve resulting in leakage of product onto graveled area adjacent to the truck scale. Foss Environmental excavated materials and performed confirmation sampling. Estimated release of 70 gallons.
16	8/5/98	Lacquer thinner	Warehouse	Forklift pierced bottom of drum resulting in release of approximately 25 gallons of product onto warehouse floor. Product was contained and absorbed. No release to the environment.
17	9/22/98	Sodium hypochlorite	GWEM Warehouse	A tote ruptured while being moved to the trailer. Approximately 220 gallons of product was spilled. Material was contained with absorbent. No release to the environment.
18	1/7/99	pH water	Storage yard	A hose ruptured during pumpdown of one of the pH pumps. Unknown quantity ran into the asphalt trench. Drainage valves were closed – no material reached the river. Ditch was hosed down, materials were pumped into a tote and returned to remediation tank.
19	3/1/99	Lubricoat	Tech Center loading bay	Tote overturned causing release of 200 gallons of product onto paved truck area. Sewer hole was covered immediately. Material was absorbed. No release to tank or water.
20	3/21/96	Naphtha solvent	Rail tank car	A gasket leaked while unloading a railcar. Salvaged product was pumped into recovered drums. Estimated 40 lbs released and recovered.

Table 3

Groundwater Sampling Rationale

McCall Oil and Chemical Corporation
Focused RI Workplan

Potential Source Area	Sampling Locations	Chemical Class Tested [a]	Rationale
McCall Oil & Chemical Corp.			
Diesel rack (marine terminal)	EX-2, GP-20	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of TPH/PAHs
Asphalt rack (asphalt plant)	GP-8	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of TPH/PAHs
Asphalt plant AST tank farm	GP-8, -9, -21,-28, -29, -30, -37	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of TPH/PAHs
	GP-48, -49, -50	TPH (soil only)	Evaluate extent of TPH detected at GP-9
Railcar loading/unloading facility	GP-6, -7	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs and TPH/PAHs
Marine terminal AST tank farm	GP-15 to GP-20, GP-22, -23, -24, -25, -26, -27, -34, -35, -36, EX-2, EX-3, EX-5, MW-8, -13	VOCs, SVOCs, PAHs, TPH	Document groundwater quality in AST farm and leaving site
Former Great Western Chemical Co.			
Railcar loading/unloading facility	GP-6, -7	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs and TPH/PAHs
Acid/solvent AST tank farm	EX-1, EX-6, GP-8, GP-9	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs
Drumming shed	EX-1, EX-6, GP-9, -10, -38, -39, MW-6, -7	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs
	GP-41, -42, -43, -44	VOCs	Evaluate vertical extent of contamination
Former CCA production area	EX-4 (MW-2), MW-1, -3, -4, -5	VOCs, SVOCs, PAHs, TPH	Downgradient of documented source of metals. Source has been removed.
	GP-11, -12, -13, -14, -15	VOCs, SVOCs, PAHs, TPH, Metals	
	GP-51, -52, -53	Metals	
Upgradient Off-Site Source Areas	GP-1, -2, -31, EX-7, MW-9, -10, -11, -12	VOCs, SVOCs, PAHs, TPH	Evaluate groundwater quality entering the site from upgradient sources
	GP-3, -4, -5	VOCs, SVOCs, PAHs, TPH, Metals	
	GP-32, -33, -40	VOCs, SVOCs, PAHs, TPH	
	GP-45, -46, -47	TPH	Evaluate extent of free product
	GP-54 through GP-63	Not Tested	Evaluate extent of free product

NOTE: VOCs = chlorinated VOCs; SVOCs = four semivolatile organic compounds listed in workplan; PAHs = polynuclear aromatic hydrocarbons;
TPH = total petroleum hydrocarbons as diesel and oil; Metals = dissolved arsenic, chromium, and copper.

[a] List of chemicals to be tested for each chemical class is shown in QAPP (Appendix B of RI Workplan).

Table 4
LWG Round 2A Sediment Sample Results
River Miles 7.5 to 8.5
Portland, Oregon

Station ID	Approximate River Mile		Total LPAHs (ug/kg)	Total HPAHs (ug/kg)	Total PAHs (ug/kg)	Arsenic (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Zinc (mg/kg)	Dibenzofuran (ug/kg)	4-Methylphenol (ug/kg)	Butylbenzyl phthalate (ug/kg)	Di-n-octyl phthalate (ug/kg)	Total PCBs (ug/kg)	Bioassay Result[1]
G369	7.50		31	192	223	4.3	36	41	109	1.3	12	3.7 U	3 U	20	
G377	7.55		13	120	133	2.9	23	16	75	0.39	4	2.1 U	1.7 U	0.9	PASS
G374	7.60		33	218	251	4.6	35	41	110	1.2	18	5.5	2.8 U	23	
G389	7.65		1	2	3	1.9	25	16	52	0.26 U	4.4 U	2.3 U	1.8 U	2.7	CM HIT
G381	7.68		87	238	325	4.5	34	42	175	2.8	15	2.9 U	2.3 U	85	
G394	7.73		3,290	1,800	5,090	4.2	39	50	244	52	200 U	130 U	110 U	703	
G401	7.79		674	3,560	4,234	4.5	30	36	140	17	29 U	15 U	40	36	PASS
G404	7.80		225	1,020	1,245	4.2	34	40	120	12	16	2.9 U	15	27	
C532	7.81		256	546	802	5.0	37	54	170	8.5	110	15 U	12 U	141	
G391	7.82		41	188	229	4.5	41	46	126	1.9	11	4.4	2.8 U	13	
G399	7.84	McCall	359	1,900	2,259	5.4	28	32	105	5.5	26	2.5 U	2 U	25	
G403	7.88		69	143	212	3.7	15	16	72	1.1	3.9 U	2 U	1.6 U	2.4	PASS
G407	7.97		51	288	339	3.6	34	38	124	2.4	23	5.6	2.5 U	97	
G410	8.01		29	118	147	4.1	37	41	116	1.2	14	3.8 U	3 U	22	
G413	8.03		13	104	117	2.4	17	28	142	0.52	6	2.1 U	1.7 U	51	PASS
G418	8.11		31	150	181	4.2	40	46	137	1.8	> 200	6.2	3.2 U	14	
G422	8.15		229	419	648	3.8	34	40	205	5.2	38	2.8 U	2.2 U	84	
G423	8.21		22	148	170	4.4	35	46	186	1.1	17	3.6 U	2.9 U	49	
G427	8.30		74	240	314	4.1	34	48	160	3.9	21	3.3 U	2.6 U	80	
G431	8.32		490	3,600	4,090	2.9	26	75	167	14	10 U	16	4.2 U	127	
G432	8.33		565	2,550	3,115	3.8	36	81	343	19	25 U	13 U	24	590	
G434	8.35		1,420	7,200	8,620	4.1	28	47	189	11	47	13 U	11 U	245	
G437	8.40		113	553	666	3.7	27	44	157	4.4	37	2.8 U	2.3 U	56	PASS
G439	8.43		200	1,320	1,520	3.4	34	36	124	7.1	25	12	2.1 U	47	
G436	8.46		19	78	97	8.7	13	13	41	1.5	3.6 U	10	1.5 U	4.3	
Sedt. Quality Guidelines:															
LWG Lowest FPM/ AET[2]			--	--	$\boxed{22,000}$	$\boxed{23}$	>224	562	703	--	$\boxed{390}$	1,200	--	$\boxed{220}$	
LWG 2nd-Lowest FPM/ AET[2]			--	--	1,270,000	24	>224	562	1,360	--	>510	>2,800	--	300	
WDOE 2003 LAET[3]			$\boxed{6,590}$	$\boxed{31,640}$	--	31	133	619	683	$\boxed{443}$	760	$\boxed{366}$	$\boxed{201}$	354	
WDOE 2003 2LAET[3]			41,970	120,500	--	51	133	829	1,080	660	2360	980	256	394	
McDonald et al PEC[4]					22,800	33	$\boxed{111}$	$\boxed{149}$	$\boxed{459}$	--	--	--	--	676	
Harbor-wide Mean value			25,800	34,500	60,000	4.2	32	54	139	283	78	73	155	216	
Harbor-wide Median Value			149	832	1,010	3.7	31	39	109	4.4	16	12	38	29	

Notes:
(1) Includes Level 1 results for *Chironomus* mortality (CM), *Chironomus* Growth (CG), and *Hyalella* Mortality (HM) endpoints
(2) Includes lowest and second lowest Level 1 FPM/AET values for *Chironomus* mortality, *Chironomus* growth, *Chironomus* pooled, and *Hyalella* mortality endpoints;
Floating Percentile Method (FPM) values are given highest priority; Apparent Effects Threshold (AET) values used if FPM values are not available
Data from Windward et al. 2006 (Draft)
(3) Includes lowest and second lowest AET values for *Chironomus* mortality, *Chironomus* growth, and *Hyalella* mortality endpoints; WDOE 2003
(4) Probably Effects Concentration (PEC) from McDonald et al. 2000
Boxed value is the most stringent of the listed sediment quality values

Table 5
LWG Bioassay Testing Results
McCall Oil and Chemical

Table 5.1
Results of *Hyallella azteca* Mortality Test

Bioassay Station ID	Bioassay Type	Bioassay Variable	Mean survivorship	Mean Percent Mortality
Control	HYA28	Mortality	9.875	1.25
G401	HYA28	Mortality	9.625	3.75
G403	HYA28	Mortality	9.625	3.75
G413	HYA28	Mortality	9.875	1.25

Table 5.2
Results of *Chironomus tentans* Mortality Test

Bioassay Station ID	Bioassay Type	Bioassay Variable	Mean Survivorship	Mean Percent Mortality
Control	CHR10	Mortality	9.500	5.00
G401	CHR10	Mortality	9.375	6.25
G403	CHR10	Mortality	9.125	8.75
G413	CHR10	Mortality	9.375	6.25

Table 5.3
Results of *Chironomus tentans* Growth Test

Bioassay Station ID	Bioassay Type	Bioassay Variable	Mean Growth
Control	CHR10	Growth	1.08
G401	CHR10	Growth	1.01
G403	CHR10	Growth	1.07
G413	CHR10	Growth	1.15

Table 6
TPH in Groundwater and Storm Water
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Geoprobe Borings - Water µg/L (ppb)							
GP-1	12/11/00	100	U	100	U	250	U
GP-2	12/11/00	**130**	H	100	U	250	U
GP-3	12/11/00	**170**	H	**280**	L	250	U
GP-4	12/11/00	**2500**	H	**7100**	F	250	U
GP-5	12/11/00	**620**	H	**430**	Y	250	U
GP-6	12/14/00	100	U	100	U	250	U
GP-7	12/14/00	100	U	100	U	250	U
GP-8	12/12/00	100	U	**100**	Y	250	U
GP-9	12/12/00	100	U	**130**	Y	250	U
GP-10	12/12/00	100	U	**100**	Y	250	U
GP-11	12/12/00	100	U	**130**	Y	250	U
GP-12	12/13/00	100	U	**130**	H	250	U
GP-12 Duplicate	12/13/00	100	U	**160**	Y	250	U
GP-13	12/12/00	**110**	Z	**260**	Y	250	U
GP-14	12/13/00	100	U	100	U	250	U
GP-15	12/13/00	100	U	**2800**	F	250	U
GP-16	12/13/00	100	U	100	U	250	U
GP-17	12/13/00	100	U	100	U	250	U
GP-18	12/14/00	100	U	100	U	250	U
GP-19	12/14/00	100	U	100	U	250	U
GP-19 Duplicate	12/14/00	100	U	100	U	250	U
GP-20	12/14/00	100	U	**550**	Y	250	U
GP-21	12/12/00	100	U	**120**	Y	250	U
GP-22	02/09/01	**210**	H	**1100**	F	250	U
GP-23	02/09/01	100	U	**440**	H	250	U
GP-24	02/09/01	100	U	**270**	H	250	U
GP-25	02/09/01	100	U	**280**	H	250	U
GP-26	02/09/01	100	U	**300**	H	250	U
GP-27	02/12/01	100	U	**170**	H	250	U
GP-28	02/12/01	100	U	100	U	250	U
GP-29	02/12/01	100	U	100	U	250	U
GP-30	02/12/01	100	U	100	U	250	U
GP-30 Duplicate	02/12/01	100	U	**120**	H	250	U
GP-31	02/13/01	**1800**	H	**7600**	Y	250	U
GP-32	02/13/01	100	U	**700**	H	250	U
GP-33	02/13/01	100	U	**320**	Y	250	U
GP-34	02/13/01	**130**	H	**2100**	Y	250	U
GP-35	02/13/01	100	U	**200**	H	250	U
GP-36	02/13/01	100	U	**210**	Y	250	U
GP-37	02/14/01	100	U	100	U	250	U
GP-38	02/14/01	100	U	100	U	250	U
GP-38 Duplicate	02/14/01	100	U	100	U	250	U
GP-39	02/14/01	100	U	100	U	250	U
GP-40	02/14/01	100	U	**640**	Y	250	U
GP-45	11/14/01	**> 667**	DET	1680	U	1680	U
GP-46	11/14/01	**> 714**	DET	**38700**		**28000**	
GP-47	11/14/01	**> 250**	DET	630	U	630	U

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Table 6
TPH in Groundwater and Storm Water
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Monitoring Wells - Water µg/L (ppb)							
EX-1	09/08/94	50	U	50	U	**266**	
EX-1 Duplicate	09/08/94	5	U				
EX-1	12/30/94	50	U	50	U	**632**	
EX-1	03/29/95	50	U	50	U	**454**	
EX-1	07/14/95	50	U	50	U	200	U
EX-1	05/02/97	**167**	Y	50	U	200	U
EX-1 Duplicate	05/02/97	**188**	Y	50	U	200	U
EX-1	02/04/99	100	U	100	U	**924**	
EX-1 Duplicate	02/04/99	100	U	100	U	**814**	
EX-1	12/20/00	**990**	Z	100	U	250	U
EX-1	03/07/02	**460**	H	**280**	Y	**550**	O
EX-1	10/03/02	100	U	100	U	250	U
EX-1	02/11/04	**500**	Z	**120**	Y	250	U
EX-1 Duplicate	02/11/04	**450**	Z	**120**	Y	250	U
EX-1	10/22/04	**210**	Z	**110**	H	250	U
EX-2	09/08/94	50	U	50	U	**200**	
EX-2	12/30/94	50	U	50	U	**441**	
EX-2	03/29/95	50	U	50	U	**398**	
EX-2	07/14/95	50	U	50	U	**885**	
EX-2	05/01/97	50	U	**519**	Y	200	U
EX-2	02/04/99	10	U	10	U	**569**	
EX-2	12/20/00	100	U	100	U	250	U
EX-2	03/07/02	110	U	**170**	Y	270	U
EX-2	10/04/02	100	U	**270**	Y	**290**	O
EX-2	02/12/04	100	U	**110**	Y	250	U
EX-2	10/21/04	100	U	**160**	Y	250	U
EX-3	09/08/94	50	U	50	U	200	
EX-3 Duplicate	09/08/94	50	U	50	U	200	
EX-3	12/30/94	50	U	50	U	**474**	
EX-3	03/29/95	50	U	50	U	**226**	
EX-3	07/14/95	50	U	50	U	200	U
EX-3	05/01/97	50	U	**64**	Y	200	U
EX-3	02/04/99	100	U	100	U	**564**	
EX-3	12/20/00	**690**	Z	100	U	250	U
EX-3	03/07/02	110	U	**110**	Y	270	U
EX-3	10/04/02	100	U	**120**	Y	250	U
EX-3	02/12/04	100	U	100	U	250	U
EX-3	10/21/04	100	U	100	U	250	U

Table 6
TPH in Groundwater and Storm Water
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
EX-4/MW-2	09/08/94	50	U	50	U	200	
EX-4/MW-2	12/30/94	50	U	1000	U	**3840**	
EX-4/MW-2	03/29/95	50	U	**2140**		200	U
EX-4/MW-2	07/14/95	50	U	**343**		200	U
EX-4/MW-2 Duplic	07/14/95	50	U	50	U	200	U
EX-4/MW-2	05/01/97	50	U	**1310**	Y	200	U
EX-4/MW-2	02/03/99	100	U	**787**	Y	250	U
EX-4/MW-2	12/20/00	**640**	Z	100	U	250	U
EX-4/MW-2	03/07/02	**160**	H	**920**	Y	**290**	O
EX-4/MW-2	10/03/02	**150**	H	**980**	Y	250	U
EX-4/MW-2	02/13/04	**120**	H	**920**	Y	**280**	O
EX-4/MW-2	10/22/04	**240**	H	**1700**	Y	**610**	L
EX-5	12/30/94	50	U	50	U	**1400**	
EX-5	03/29/95	50	U	50	U	**639**	
EX-5 Duplicate	03/29/95	50	U	50	U	**767**	
EX-5	07/14/95	50	U	**1500**		200	U
EX-5	05/01/97	50	U	50	U	200	U
EX-5 Duplicate	05/01/97	50	U	50	U	200	U
EX-5	02/04/99	100	U	**573**	Y	250	U
EX-5 Duplicate	02/04/99	100	U	**550**	Y	250	U
EX-5	12/20/00	**950**	Z	100	U	250	U
EX-5	03/07/02	100	U	**140**	Y	250	U
EX-5	10/04/02	100	U	**120**	Y	**270**	O
EX-6	12/30/94	50	U	50	U	**842**	
EX-6 Duplicate	12/30/94	50	U	50	U	**851**	
EX-6	03/29/95	50	U	50	U	**1160**	
EX-6	07/14/95	50	U	50	U	200	U
EX-6	05/02/97	50	U	50	U	**1450**	
EX-6	02/04/99	100	U	**1280**	Y	250	U
EX-7	12/30/94	50	U	50	U	200	U
EX-7	03/29/95	50	U	50	U	200	U
EX-7	07/14/95	50	U	50	U	200	U
EX-7	05/02/97	50	U	50	U	200	U
EX-7	02/03/99	100	U	250	U	250	U
EX-7	12/20/00	**530**	Z	100	U	250	U
EX-7	03/06/02	100	U	100	U	250	U
EX-7	10/03/02	100	U	100	U	250	U
EX-7	02/13/04	100	U	100	U	250	U
EX-7	10/21/04	100	U	100	U	250	U
EX-7 Duplicate	10/21/04	100	U	100	U	**270**	O

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Table 6
TPH in Groundwater and Storm Water
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
MW-1	05/01/97	50	U	**319**	Y	200	U
MW-1	02/03/99	100	U	250	U	250	U
MW-1	12/20/00	**1200**	Z	100	U	250	U
MW-1	03/07/02	100	U	**110**	Y	250	U
MW-1	10/03/02	100	U	**220**	Y	250	U
MW-1	02/11/04	100	U	**120**	Y	250	U
MW-1	10/22/04	100	U	**300**	Y	**320**	L
MW-1 Duplicate	10/22/04	100	U	**270**	Y	**320**	L
MW-3	05/01/97	50	U	**1430**	Y	200	U
MW-3	02/03/99	100	U	**1190**	Y	250	U
MW-3	12/20/00	**720**	Z	100	U	250	U
MW-3 Duplicate	03/07/02	**240**	H	**1000**	Y	**390**	O
MW-3	03/07/02	**220**	H	**1000**	Y	**410**	O
MW-3	10/03/02	**320**	H	**3000**	Y	**520**	L
MW-3	02/11/04	**300**	H	**2000**	Y	250	U
MW-3	10/22/04	**150**	H	**2400**	Y	**540**	L
MW-4	05/01/97	50	U	**312**	Y	200	U
MW-4	02/03/99	100	U	**716**	Y	250	U
MW-4	12/20/00	100	U	100	U	250	U
MW-4	03/07/02	**180**	H	**870**	Y	**350**	O
MW-4	10/03/02	**170**	H	**1200**	Y	250	U
MW-5	05/01/97	50	U	**204**	Y	200	U
MW-5	02/03/99	100	U	**391**	Y	250	U
MW-5	12/20/00	100	U	100	U	250	U
MW-5	03/07/02	100	U	**310**	Y	**260**	O
MW-5	10/03/02	100	U	**280**	Y	250	U
MW-5 Duplicate	10/03/02	100	U	**310**	Y	250	U
MW-5	02/11/04	100	U	**290**	Y	250	U
MW-5	10/22/04	100	U	**540**	Y	**330**	L
MW-6	10/25/01	250	U	630	U	630	U
MW-6 Duplicate	10/25/01	250	U	630	U	630	U
MW-6	03/08/02	**160**	Z	**240**	Y	**500**	O
MW-6	10/03/02	100	U	**280**	Y	**350**	L
MW-6 Duplicate	10/03/02	100	U	**230**	Y	**270**	L
MW-6	02/12/04	100	U	**130**	Y	250	U
MW-6	10/21/04	100	U	**210**	Y	250	U
MW-7	10/25/01	250	U	630	U	630	U
MW-7	03/08/02	110	U	**1500**	Y	**4000**	O
MW-7	10/04/02	**160**	H	**1100**	Y	**820**	O
MW-7	02/12/04	100	U	**240**	Y	250	U
MW-7 Duplictate	02/12/04	100	U	**240**	Y	250	U
MW-7	10/21/04	100	U	**430**	Y	250	U

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Table 6
TPH in Groundwater and Storm Water
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
MW-8	10/25/01	250	U	3090		1840	
MW-8	03/07/02	650	H	20000	Y	9200	O
MW-8	10/04/02	1100	H	35000	DY	23000	DO
MW-8	02/12/04	100	U	330	Y	250	U
MW-8	10/21/04	100	U	1300	Y	830	O
MW-9	01/22/02	140	H	480	Y	310	O
MW-9	03/06/02	200	H	520	Y	300	U
MW-9 Duplicate	03/06/02	210	H	600	Y	290	U
MW-9	10/03/02	150	H	850	Y	250	U
MW-9	02/13/04	100	U	300	Y	250	U
MW-9	10/22/04	130	H	1100	Y	510	L
MW-10	01/22/02	100	U	250	Y	510	O
MW-10	03/06/02	110	U	170	Y	320	O
MW-10	10/03/02	100	U	170	Y	250	U
MW-10	02/13/04	100	U	370	Y	250	U
MW-10	10/21/04	100	U	650	Y	310	L
MW-11	01/22/02	1900	H	15000	Y	4300	O
MW-11	03/08/02	1700	H	11000	Y	2600	O
MW-12	01/22/02	110	H	630	Y	1000	O
MW-12	03/06/02	150	H	1100	Y	1900	O
MW-12	10/04/02	100	U	570	Y	660	O
MW-12	02/13/04	100	U	340	Y	250	U
MW-12	10/21/04	100	U	360	Y	410	O
MW-13	01/22/02	300	H	1000	Y	2300	O
MW-13 Duplicate	01/22/02	360	H	1300	Y	2900	O
MW-13	03/06/02	150	H	710	Y	1500	O
MW-13	10/04/02	150	Z	650	Y	1300	O
MW-14	02/12/04	100	U	300	Y	250	U
MW-14	10/21/04	100	U	430	Y	280	L
MW-15	02/12/04	100	U	100	U	250	U
MW-15	10/22/04	100	U	110	H	250	U

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Table 6
TPH in Groundwater and Storm Water
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Catch Basins - Storm Water µg/L (ppb)							
S-1W	12/20/00	**1,100**	Z	100	U	250	U
S-1W	03/06/02	110	U	110	U	270	U
S-1W	04/07/05	100	U	**340**	H	**880**	O
S-2W	12/20/00	100	U	100	U	250	U
S-2W	03/06/02	**130**	Z	110	U	260	U
S-2W	04/07/05	100	U	**310**	Y	**430**	O
S-3W	02/15/01	**1,300**	Z	**510**	Z	250	U
S-3W	03/06/02	110	U	**110**	Z	260	U
S-3W	04/07/05	**120**	Z	**550**	Y	**1,000**	O
Oil/Water Separator - Storm Water							
S-4W	02/15/01	**270**	Z	**280**	Z	250	U
S-4W Duplicate	02/15/01	**260**	Z	**300**	Z	250	U
S-4W	04/09/02	**220**	H	**1,300**	F	**550**	O
S-4W	04/07/05	100	U	**440**	Y	**340**	L

Notes: U = Not detected at method reporting limit. F = The fingerprint of the sample matches the elution pattern of calibration standard

L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.

H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.

O = The fingerprint resembles oil, but does not match the calibration standard.

Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.

Z = The fingerprint does not resemble a petroleum product.

DET= Detected above method reporting limit (method reporting limit shown)

D = The reported result is from a dilution.

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TABLE 7
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

Groundwater

Sample Designation	EX-1	EX-1	EX-1	EX-2	EX-2	EX-2	EX-2	EX-2
Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	10/04/02	02/12/04	10/21/04
LPAHs								
Naphthalene	0.008 U	0.013 U	0.028 J	0.01 J	0.013 U	0.022 J	0.023 J	0.012 U
Acenaphthylene	0.006 U	0.011 U	0.011 U	0.01 U	0.011 U	0.011 U	0.011 U	0.011 U
Acenaphthene	0.007 U	0.009 U	0.009 U	0.02 J	0.041 J	0.110 J	0.025 J	0.037 J
Fluorene	0.006 U	0.013 U	0.012 U	0.01 U	0.013 U	0.012 U	0.012 U	0.012 U
Phenanthrene	0.010 J	0.038 J	0.028 J	0.04 J	0.047 J	0.057 J	0.039 J	0.021 J
Anthracene	0.008 J	0.063 J	0.110 J	0.01 U	0.016 U	0.015 U	0.015 U	0.015 U
2-Methylnaphthalene	0.008 U	0.013 U	0.012 U	0.01 J	0.012 J	0.017 J	0.013 J	0.012 U
Total LPAH	0.018	0.101	0.166	0.078	0.100	0.206	0.100	0.058
HPAHs								
Fluoranthene	0.02 J	0.014 U	0.053 J	0.009 J	0.017 J	0.013 U	0.013 U	0.013 U
Pyrene	0.03 J	0.039 J	0.068 J	0.03 J	0.039 J	0.074 J	0.036 J	0.032 J
Benz(a)anthracene	0.01 J	0.013 U	0.024 J	0.007 J	0.013 U	0.012 U	0.012 U	0.012 U
Chrysene	0.02 J	0.015 U	0.033 J	0.007 J	0.015 U	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	0.01 J	0.021 U	0.033 J	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	0.01 J	0.021 U	0.020 U	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	0.02 J	0.018 U	0.051 J	0.007 J	0.017 U	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.02 J	0.026 U	0.050 J	0.009 J	0.026 U	0.024 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.004 U	0.03 U	0.031 U	0.005 J	0.033 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	0.02 J	0.039 J	0.061 J	0.01 J	0.018 U	0.017 U	0.017 U	0.017 U
Total HPAHs	0.16	0.08	0.37	0.10	0.06	0.07	0.04	0.03
SVOCs								
3- and 4-Methylphenol Coelution	0.003 U	0.055 U	0.051 U	0.02 J	0.055 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	0.007 U	0.015 U	0.014 U	0.007 U	0.014 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.02 U	0.028 U	0.026 U	0.02 U	0.028 U	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	0.003 U	0.035 U	0.032 U	0.003 U	0.035 U	0.032 U	0.032 U	0.032 U

Sample Designation	EX-3	EX-3	EX-3	EX-3	EX-3	EX-4/MW-2	EX-4/MW-2	EX-4/MW-2	EX-5	EX-5	EX-5
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/07/02	10/04/02	02/12/04	10/21/04	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	10/04/02
LPAHs											
Naphthalene	0.02 J	0.013 U	0.038 J	0.012 U	0.012 U	0.008 U	0.014 U	0.012 U	0.009 J	0.028 J	0.022 J
Acenaphthylene	0.01 U	0.011 U	0.011 U	0.011 U	0.011 U	0.006 U	0.012 U	0.011 U	0.006 U	0.011 U	0.011 U
Acenaphthene	0.01 J	0.009 U	0.023 J	0.009 U	0.009 U	0.140	0.300	0.190 J	0.009 J	0.024 J	0.015 J
Fluorene	0.01 U	0.013 U	0.012 U	0.012 U	0.012 U	0.006 U	0.014 U	0.012 U	0.006 U	0.013 U	0.012 U
Phenanthrene	0.04 J	0.060 J	0.057 J	0.028 J	0.016 J	0.100	0.520	0.160 J	0.020 J	0.034 J	0.039 J
Anthracene	0.01 U	0.019 J	0.016 J	0.015 U	0.015 U	0.006 U	0.071 J	0.060 J	0.006 U	0.016 U	0.017 J
2-Methylnaphthalene	0.01 U	0.012 U	0.015 J	0.012 U	0.012 U	0.008 U	0.013 U	0.012 U	0.008 U	0.012 U	0.012 U
Total LPAH	0.07	0.08	0.15	0.028	0.016	0.24	0.89	0.41	0.038	0.086	0.093
HPAHs											
Fluoranthene	0.01 J	0.038 J	0.034 J	0.013 U	0.013 U	0.01 J	0.048 J	0.028 J	0.009 J	0.013 U	0.013 U
Pyrene	0.03 J	0.064 J	0.061 J	0.028 J	0.030 J	0.02 J	0.13 J	0.049 J	0.040 J	0.046 J	0.067 J
Benz(a)anthracene	0.008 J	0.013 U	0.012 U	0.012 U	0.012 U	0.007 J	0.013 U	0.012 U	0.006 J	0.013 U	0.012 U
Chrysene	0.01 J	0.015 U	0.014 U	0.014 U	0.014 U	0.008 J	0.016 U	0.014 U	0.008 J	0.015 U	0.014 U
Benzo(b)fluoranthene	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U	0.006 J	0.021 U	0.020 U	0.005 U	0.021 U	0.020 U
Benzo(k)fluoranthene	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U	0.006 J	0.021 U	0.020 U	0.003 J	0.021 U	0.020 U
Benzo(a)pyrene	0.007 J	0.017 U	0.016 U	0.016 U	0.016 U	0.007 J	0.018 U	0.016 U	0.006 U	0.017 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.009 J	0.026 U	0.024 U	0.024 U	0.024 U	0.007 J	0.027 U	0.024 U	0.007 J	0.026 U	0.024 U
Dibenz(a,h)anthracene	0.004 U	0.033 U	0.031 U	0.031 U	0.031 U	0.004 U	0.034 U	0.031 U	0.004 U	0.033 U	0.031 U
Benzo(g,h,i)perylene	0.02 J	0.034 J	0.025 J	0.017 U	0.017 U	0.009 J	0.019 U	0.017 U	0.03 J	0.054 J	0.031 J
Total HPAHs	0.106	0.136	0.120	0.028	0.030	0.080	0.178	0.077	0.103	0.100	0.098
SVOCs											
3- and 4-Methylphenol Coelution	0.05 J	0.087 J	0.090 J	0.051 U	0.051 U	0.003 U	0.056 U	0.051 U	0.007 J	0.055 U	0.051 U
Dibenzofuran	0.007 U	0.014 U	0.014 U	0.014 U	0.014 U	0.007 U	0.015 U	0.014 U	0.007 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.02 U	0.028 U	0.026 U	0.026 U	0.026 U	0.02 U	0.028 U	0.026 U	0.02 U	0.028 U	0.026 U
Di-n-octyl Phthalate	0.003 U	0.035 U	0.032 U	0.032 U	0.032 U	0.003 U	0.036 U	0.032 U	0.003 U	0.035 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 7
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

Sample Designation	EX-7	EX-7	EX-7	MW-1	MW-1	MW-1	MW-3	MW-3	MW-3 Dup	MW-3	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-5 Dup	MW-5	MW-5
	Groundwater																		
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/06/02	10/03/02	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	03/07/02	10/03/02	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	10/03/02	10/03/02	02/11/04	10/22/04
LPAHs																			
Naphthalene	0.008 U	0.14 J	0.022 J	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.012 U	0.008 U	0.014 U	0.012 U	0.008 U	0.034 J	0.012 U	0.023	0.025 J	0.012 U
Acenaphthylene	0.006 U	0.01 U	0.011 U	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U	0.006 U	0.012 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U
Acenaphthene	0.007 U	0.01 U	0.009 U	0.007 U	0.009 U	0.009 U	0.170	0.210	0.230	0.330	0.030 J	0.064 J	0.130 J	0.007 U	0.009 U	0.009 U	0.009 U	0.009 U	0.009 U
Fluorene	0.006 U	0.01 U	0.012 U	0.006 U	0.012 U	0.014 U	0.006 U	0.012 U	0.012 U	0.012 U	0.006 U	0.014 U	0.012 U	0.006 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U
Phenanthrene	0.007 U	0.02 J	0.015 J	0.007 U	0.011 U	0.012 U	0.130	0.180 J	0.170 J	0.270	0.060 J	0.082 J	0.086 J	0.007 U	0.011 U	0.021 J	0.021 J	0.011 U	0.011 U
Anthracene	0.006 U	0.02 J	0.038 J	0.006 U	0.015 U	0.028 J	0.020 J	0.049 J	0.055 J	0.092 J	0.010 J	0.035 J	0.046 J	0.006 U	0.016 U	0.025 J	0.022 J	0.015 U	0.015 U
2-Methylnaphthalene	0.008 U	0.01 U	0.012 U	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.012 U	0.008 U	0.013 U	0.012 U	0.008 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U
Total LPAH	0.008	0.18	0.08	0.008	0.015	0.03	0.32	0.44	0.46	0.69	0.10	0.18	0.26	0.008	0.03	0.05	0.07	0.025	0.015
HPAHs																			
Fluoranthene	0.007 U	0.018 J	0.024 J	0.007 U	0.013 U	0.013 U	0.01 J	0.065 J	0.071 J	0.087 J	0.02 J	0.04 J	0.013 U	0.007 U	0.014 U	0.031 J	0.026 J	0.013 U	0.013 U
Pyrene	0.007 U	0.022 J	0.028 J	0.007 U	0.015 U	0.015 U	0.05 J	0.13 J	0.11 J	0.19 J	0.05 J	0.11 J	0.15 J	0.007 U	0.024 J	0.037 J	0.034 J	0.015 U	0.015 U
Benz(a)anthracene	0.005 U	0.012 U	0.012 U	0.005 U	0.012 U	0.012 U	0.008 J	0.012 U	0.024 J	0.048 J	0.01 J	0.053 J	0.038 J	0.005 U	0.013 U	0.030 J	0.012 U	0.012 U	0.012 U
Chrysene	0.006 U	0.015 U	0.014 U	0.006 U	0.014 U	0.014 U	0.009 J	0.033 J	0.030 J	0.062 J	0.02 J	0.048 J	0.054 J	0.006 U	0.015 U	0.022 J	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	0.005 U	0.020 U	0.020 U	0.005 U	0.020 U	0.020 U	0.006 J	0.020 U	0.020 U	0.055 J	0.01 J	0.021 U	0.044 J	0.005 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	0.004 J	0.020 U	0.020 U	0.003 U	0.020 U	0.020 U	0.006 J	0.020 U	0.020 U	0.020 U	0.01 J	0.021 U	0.020 U	0.003 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	0.006 U	0.017 U	0.019 J	0.006 U	0.016 U	0.016 U	0.007 J	0.016 U	0.016 U	0.077 J	0.01 J	0.018 U	0.043 J	0.006 U	0.018 U	0.016 U	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.005 J	0.025 U	0.024 U	0.004 U	0.024 U	0.024 U	0.008 J	0.024 U	0.024 U	0.053 J	0.01 J	0.026 U	0.032 J	0.004 U	0.026 U	0.024 U	0.024 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.004 U	0.031 U	0.031 U	0.004 U	0.031 U	0.031 U	0.004 U	0.031 U	0.031 U	0.031 U	0.004 U	0.033 U	0.031 U	0.004 U	0.033 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	0.007 J	0.017 U	0.021 J	0.005 U	0.017 U	0.017 U	0.009 J	0.039 J	0.017 U	0.066 J	0.02 J	0.018 U	0.048 J	0.005 U	0.018 U	0.017 U	0.017 U	0.017 U	0.017 U
Total HPAHs	0.016	0.040	0.092	0.007	0.031	0.031	0.113	0.267	0.235	0.638	0.160	0.251	0.409	0.007	0.02	0.12	0.09	0.031	0.031
SVOCs																			
3- and 4-Methylphenol Coelution	0.003 U	0.052 U	0.051 U	0.003 U	0.051 U	0.051 U	0.003 U	0.051 U	0.051 U	0.051 U	0.003 U	0.056 U	0.051 U	0.003 U	0.055 U	0.051 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.014 U	0.095 U	0.015 U	0.014 U	0.007 U	0.015 U	0.200 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.02 U	0.041 J	0.026 U	0.02 U	0.052 J	0.026 U	0.02 U	0.026 U	0.026 U	0.026 U	0.02 U	0.028 U	0.026 U	0.02 U	0.028 U	0.048 J	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	0.003 U	0.033 U	0.032 U	0.003 U	0.032 U	0.032 U	0.003 U	0.032 U	0.032 U	0.032 U	0.003 U	0.035 U	0.032 U	0.003 U	0.035 U	0.014 U	0.014 U	0.032 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 7
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	Groundwater																			
Sample Designation	MW-6		MW-6 Dup		MW-6		MW-6		MW-6 Dup		MW-7		MW-7		MW-7		MW-7		MW-7 Dup	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Date Sampled	10/25/01		10/25/01		03/08/02		10/03/02		10/03/02		10/25/01		03/08/02		10/04/02		02/12/04		02/12/04	
LPAHs																				
Naphthalene	5.00	U	5.00	U	0.12	J	0.048	J	0.066	J	5.00	U	0.086	J	0.020	J	0.012	U	0.012	U
Acenaphthylene	5.00	U	5.00	U	0.04	J	0.011	U	0.011	U	5.00	U	0.025	J	0.011	U	0.011	U	0.011	U
Acenaphthene	5.00	U	5.00	U	0.01	U	0.009	U	0.020	J	5.00	U	0.009	U	0.009	U	0.009	U	0.045	J
Fluorene	5.00	U	5.00	U	0.02	J	0.012	U	0.012	U	5.00	U	0.013	U	0.012	U	0.012	U	0.012	U
Phenanthrene	5.00	U	5.00	U	0.13	J	0.039	J	0.059	J	5.00	U	0.077	J	0.034	J	0.024	J	0.036	J
Anthracene	5.00	U	5.00	U	0.05	J	0.045	J	0.049	J	5.00	U	0.039	J	0.031	J	0.019	J	0.029	J
2-Methylnaphthalene	5.00	U	5.00	U	0.03	J	0.012	U	0.012	U	5.00	U	0.034	J	0.012	U	0.012	U	0.012	U
Total LPAH					0.38		0.13		0.19				0.26		0.09		0.043		0.11	
HPAHs																				
Fluoranthene	5.00	U	5.00	U	0.18	J	0.08	J	0.12	J	5.00	U	0.061	J	0.013	U	0.013	U	0.013	U
Pyrene	5.00	U	5.00	U	0.25		0.12	J	0.20		5.00	U	0.089	J	0.025	J	0.015	U	0.015	U
Benz(a)anthracene	5.00	U	5.00	U	0.077	J	0.033	J	0.042	J	5.00	U	0.044	J	0.012	U	0.012	U	0.012	U
Chrysene	5.00	U	5.00	U	0.087	J	0.038	J	0.052	J	5.00	U	0.045	J	0.014	U	0.014	U	0.014	U
Benzo(b)fluoranthene	5.00	U	5.00	U	0.088	J	0.037	J	0.057	J	5.00	U	0.021	U	0.020	U	0.020	U	0.020	U
Benzo(k)fluoranthene	5.00	U	5.00	U	0.045	J	0.020	U	0.020	U	5.00	U	0.021	U	0.020	U	0.020	U	0.020	U
Benzo(a)pyrene	5.00	U	5.00	U	0.096	J	0.028	J	0.057	J	5.00	U	0.017	U	0.016	U	0.016	U	0.016	U
Indeno(1,2,3-cd)pyrene	5.00	U	5.00	U	0.088	J	0.037	J	0.057	J	5.00	U	0.026	U	0.024	U	0.024	U	0.024	U
Dibenz(a,h)anthracene	5.00	U	5.00	U	0.033	U	0.031	U	0.031	U	5.00	U	0.032	U	0.031	U	0.031	U	0.031	U
Benzo(g,h,i)perylene	5.00	U	5.00	U	0.09	J	0.048	J	0.071	J	5.00	U	0.099	J	0.017	U	0.017	U	0.017	U
Total HPAHs					1.00		0.42		0.66				0.34		0.03		0.03		0.03	
SVOCs																				
3- and 4-Methylphenol Coelution	5.00	U	5.00	U	0.073	J	0.051	U	0.051	U	5.00	U	1.1		0.05	U	0.051	U	0.051	U
Dibenzofuran	5.00	U	5.00	U	0.015	U	0.014	U	0.014	U	5.00	U	0.014	U	0.014	U	0.014	U	0.014	U
Butyl Benzyl Phthalate	5.00	U	5.00	U	0.028	U	0.026	U	0.026	U	5.00	U	0.027	U	0.026	U	0.026	U	0.026	U
Di-n-octyl Phthalate	5.00	U	5.00	U	0.035	U	0.032	U	0.032	U	5.00	U	0.034	U	0.032	U	0.032	U	0.032	U

	Groundwater																			
Sample Designation	MW-7		MW-8		MW-8		MW-8		MW-8		MW-8		MW-9		MW-9		MW-9 Dup		MW-9	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Date Sampled	10/21/04		10/25/01		03/07/02		10/04/02		02/12/04		10/21/04		01/22/02		03/06/02		03/06/02		10/03/02	
LPAHs																				
Naphthalene	0.012	U	5.00	U	0.16	J	0.38		0.031	J	0.012	U	0.17	J	0.013	U	0.012	U	0.012	U
Acenaphthylene	0.011	U	5.00	U	0.01	U	0.21		0.011	U	0.011	U	0.05	J	0.110	J	0.069	J	0.011	U
Acenaphthene	0.032	J	5.00	U	0.58		0.78		0.340		0.210		0.12	J	0.120	J	0.150	J	0.250	
Fluorene	0.012	U	5.00	U	0.56		0.91		0.360		0.220		0.01	U	0.013	U	0.012	U	0.012	U
Phenanthrene	0.011	U	5.00	U	1.20		1.70		0.220		0.220		0.26		0.220		0.160	J	0.200	J
Anthracene	0.015	U	5.00	U	0.10	J	0.38		0.028	J	0.015	U	0.09	J	0.098	J	0.067	J	0.079	J
2-Methylnaphthalene	0.012	U	5.00	U	0.08	J	0.16	J	0.012	U	0.002	J	0.02	J	0.012	U	0.012	U	0.012	U
Total LPAH	0.03				2.68		4.52		0.98		0.65		0.71		0.55		0.45		0.53	
HPAHs																				
Fluoranthene	0.013	U	5.00	U	0.22		0.73		0.035	J	0.048	J	0.25		0.33		0.13	J	0.11	J
Pyrene	0.015	U	5.00	U	0.34		1.10		0.066	J	0.079	J	0.41		0.48		0.26		0.24	
Benz(a)anthracene	0.012	U	5.00	U	0.071	J	0.390		0.012	U	0.012	U	0.18	J	0.23		0.096	J	0.075	J
Chrysene	0.014	U	5.00	U	0.16	J	0.56		0.014	U	0.014	U	0.18	J	0.24		0.10	J	0.07	J
Benzo(b)fluoranthene	0.020	U	5.00	U	0.064	J	0.350		0.020	U	0.020	U	0.18	J	0.28		0.098	J	0.074	J
Benzo(k)fluoranthene	0.020	U	5.00	U	0.02	U	0.13	J	0.020	U	0.020	U	0.078	J	0.096	J	0.027	J	0.033	J
Benzo(a)pyrene	0.016	U	5.00	U	0.089	J	0.360		0.016	U	0.016	U	0.19	J	0.26		0.094	J	0.077	J
Indeno(1,2,3-cd)pyrene	0.024	U	5.00	U	0.04	J	0.25		0.024	U	0.024	U	0.12	J	0.15	J	0.062	J	0.053	J
Dibenz(a,h)anthracene	0.031	U	5.00	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U
Benzo(g,h,i)perylene	0.017	U	5.00	U	0.057	J	0.310		0.017	U	0.017	U	0.130	J	0.16	J	0.065	J	0.071	J
Total HPAHs	0.03				1.04		4.18		0.101		0.127		1.72		2.23		0.93		0.81	
SVOCs																				
3- and 4-Methylphenol Coelution	0.051	U	5.00	U	0.22	J	1.60		0.051	U	0.051	U	0.051	U	0.052	U	0.051	U	0.051	U
Dibenzofuran	0.014	U	5.00	U	0.18	J	0.014	U	0.092	J	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Butyl Benzyl Phthalate	0.026	U	5.00	U	0.13	J	0.026	U	0.026	U	0.026	U	0.026	U	0.050	J	0.074	J	0.026	U
Di-n-octyl Phthalate	0.032	U	5.00	U	0.032	U	0.032	U	0.032	U	0.032	U	0.032	U	0.033	U	0.032	U	0.032	U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 7
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	Groundwater															
Sample Designation	MW-10	MW-10	MW-10	MW-11	MW-11	MW-12	MW-12	MW-12	MW-13	MW-13 Dup	MW-13	MW-13	MW-14	MW-14	MW-15	MW-15
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	01/22/02	03/06/02	10/03/02	01/22/02	03/08/02	01/22/02	03/06/02	10/04/02	01/22/02	01/22/02	03/06/02	10/04/02	02/11/04	10/21/04	02/12/04	10/22/04
LPAHs																
Naphthalene	0.058 J	0.24	0.012 U	0.012 U	0.12 U	0.11 J	0.12 J	0.012 U	0.190 J	0.25	0.24	0.10 J	0.023 J	0.012 U	0.016 J	0.012 U
Acenaphthylene	0.019 J	0.02 J	0.011 U	0.011 U	0.11 U	0.02 J	0.03 J	0.011 U	0.031 J	0.04 J	0.05 J	0.02 J	0.011 U	0.011 U	0.011 U	0.011 U
Acenaphthene	0.120 J	0.01 U	0.009 U	0.430	1.60 JD	0.19 J	0.15 J	0.250	0.087 J	0.09 J	0.18 J	0.25	0.031 J	0.009 U	0.009 U	0.009 U
Fluorene	0.012 U	0.01 U	0.012 U	0.860	2.00 D	0.01 U	0.01 U	0.012 U	0.041 J	0.03 J	0.04 J	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U
Phenanthrene	0.073 J	0.08 J	0.012 J	1.800	3.00 D	0.11 J	0.11 J	0.150 J	0.110 J	0.13 J	0.19 J	0.14 J	0.011 U	0.011 U	0.011 U	0.011 U
Anthracene	0.032 J	0.03 J	0.029 J	0.410	0.66 JD	0.02 J	0.02 U	0.054 J	0.025 J	0.03 J	0.04 J	0.02 J	0.015 U	0.015 U	0.070 J	0.055 J
2-Methylnaphthalene	0.012 U	0.02 J	0.012 U	20.000 D	24.00 D	0.04 J	0.03 J	0.012 U	0.058 J	0.07 J	0.06 J	0.03 J	0.012 U	0.012 U	0.012 U	0.012 U
Total LPAH	0.30	0.39	0.04	23.50	31.26	0.48	0.44	0.45	0.54	0.65	0.80	0.56	0.054	0.015	0.086	0.055
HPAHs																
Fluoranthene	0.081 J	0.10 J	0.016 J	0.43	0.38 JD	0.036 J	0.058 J	0.013 U	0.10 J	0.12 J	0.14 J	0.058 J	0.013 U	0.013 U	0.013 U	0.013 U
Pyrene	0.130 J	0.15 J	0.059 J	0.61	0.89 JD	0.076 J	0.11 J	0.10 J	0.14 J	0.19 J	0.19 J	0.11 J	0.015 U	0.015 U	0.021 J	0.024 J
Benz(a)anthracene	0.078 J	0.081 J	0.026 J	0.012 U	0.23 JD	0.012 U	0.052 J	0.012 U	0.038 J	0.053 J	0.063 J	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Chrysene	0.084 J	0.094 J	0.017 J	0.13 J	0.50 JD	0.047 J	0.046 J	0.014 U	0.052 J	0.056 J	0.075 J	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	0.056 J	0.070 J	0.020 U	0.02 U	0.20 U	0.020 U	0.021 U	0.020 U	0.020 U	0.072 J	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	0.020 U	0.037 J	0.020 U	0.02 U	0.20 U	0.020 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	0.071 J	0.090 J	0.016 U	0.016 U	0.16 U	0.016 U	0.018 U	0.016 U	0.044 J	0.072 J	0.098 J	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.024 U	0.052 J	0.024 U	0.024 U	0.24 U	0.024 U	0.026 U	0.024 U	0.024 U	0.053 J	0.082 J	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.031 U	0.031 U	0.031 U	0.031 U	0.31 U	0.031 U	0.033 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	0.047 J	0.061 J	0.017 U	0.017 U	0.17 U	0.017 U	0.047 J	0.017 U	0.017 U	0.072 J	0.110 J	0.021 J	0.017 U	0.017 U	0.017 U	0.017 U
Total HPAHs	0.55	0.74	0.12	1.17	2.00	0.16	0.31	0.10	0.37	0.69	0.76	0.26	0.031	0.031	0.021	0.024
SVOCs																
3- and 4-Methylphenol Coelution	0.051 U	0.053 U	0.051 U	0.051 U	0.510 U	1.9	0.41 J	0.07 J	28 D	31 D	1.5	0.4 J	0.051 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	0.014 U	0.014 U	0.014 U	0.014 U	0.81 JD	0.20 U	0.015 U	0.014 U	0.018 J	0.021 J	0.021 J	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.045 J	0.040 J	0.026 U	0.026 U	0.26 U	0.20 U	0.028 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	0.032 U	0.033 U	0.032 U	0.032 U	0.32 U	0.20 U	0.035 U	0.032 U	0.032 U	0.032 U	0.034 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 7
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	Stormwater																									
Sample Designation	S-1		S-1		S-1		S-2		S-2		S-2		S-3		S-3		S-3		S-4		S-4 Duplicate		S-4		S-4	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Date Sampled	12/20/00		03/06/02		04/07/05		12/20/00		03/06/02		04/07/05		12/20/00		03/06/02		04/07/05		12/20/00		12/20/00		04/09/02		04/07/05	
	LPAHs																									
Naphthalene	0.03	J	0.03	J	0.031	J	0.07	J	0.025	J	0.012	U	0.07	J	0.025	J	0.012	U	0.04	J	0.04	J	0.012	U	0.012	U
Acenaphthylene	0.01	J	0.01	U	0.037	J	0.02	J	0.011	U	0.026	J	0.10	U	0.011	U	0.011	U	0.10	U	0.10	U	0.011	U	0.011	U
Acenaphthene	0.02	J	0.01	U	0.009	U	0.02	J	0.009	U	0.009	U	0.10	U	0.009	U	0.009	U	0.14		0.12		0.085	J	0.009	U
Fluorene	0.02	J	0.01	U	0.026	J	0.04	J	0.013	U	0.012	U	0.02	J	0.013	U	0.012	U	0.36		0.34		0.170	J	0.012	U
Phenanthrene	0.07	J	0.03	J	0.190	J	0.25		0.043	J	0.045	J	0.20		0.054	J	0.057	J	0.46		0.35		0.073	J	0.032	J
Anthracene	0.01	U	0.02	U	0.039	J	0.02	J	0.016	U	0.015	U	0.10	U	0.015	U	0.015	U	0.02	J	0.01	J	0.015	U	0.015	U
2-Methylnaphthalene	0.03	J	0.02	J	0.012	U	0.05	J	0.014	J	0.012	U	0.10		0.012	U	0.012	U	0.09	J	0.10		0.012	U	0.012	U
Total LPAH	0.176		0.078		0.323		0.470		0.082		0.071		0.386		0.079		0.057		1.110		0.960		0.328		0.032	
	HPAHs																									
Fluoranthene	0.02	J	0.013	U	0.230		0.099		0.022	J	0.059	J	0.06	J	0.023	J	0.040	J	0.06	J	0.05	J	0.01	U	0.01	U
Pyrene	0.02	J	0.015	U	0.280		0.12		0.025	J	0.059	J	0.03	J	0.022	J	0.037	J	0.19		0.16		0.10	J	0.10	J
Benz(a)anthracene	0.005	U	0.012	U	0.081	J	0.03	J	0.013	U	0.012	U	0.007	J	0.012	U	0.012	U	0.03	J	0.02	J	0.012	U	0.012	U
Chrysene	0.008	J	0.014	U	0.140	J	0.06	J	0.015	U	0.014	U	0.03	J	0.015	U	0.014	U	0.12		0.09	J	0.014	U	0.014	U
Benzo(b)fluoranthene	0.006	J	0.020	U	0.150	J	0.04	J	0.021	U	0.021	J	0.01	J	0.020	U	0.020	U	0.03	J	0.03	J	0.020	U	0.020	U
Benzo(k)fluoranthene	0.004	J	0.020	U	0.049	J	0.03	J	0.021	U	0.020	U	0.008	J	0.020	U	0.020	U	0.02	J	0.01	J	0.020	U	0.020	U
Benzo(a)pyrene	0.006	U	0.016	U	0.100	J	0.03	J	0.017	U	0.020	U	0.095	U	0.017	U	0.016	U	0.03	J	0.02	J	0.016	U	0.016	U
Indeno(1,2,3-cd)pyrene	0.006	J	0.024	U	0.089	J	0.04	J	0.026	U	0.020	U	0.01	J	0.025	U	0.024	U	0.02	J	0.02	J	0.024	U	0.024	U
Dibenz(a,h)anthracene	0.004	U	0.031	U	0.031	U	0.009	J	0.032	U	0.020	U	0.19	U	0.031	U	0.031	U	0.009	J	0.008	J	0.031	U	0.031	U
Benzo(g,h,i)perylene	0.007	J	0.017	U	0.140	J	0.06	J	0.018	U	0.020	U	0.01	J	0.017	U	0.017	U	0.04	J	0.03	J	0.017	U	0.017	U
Total HPAHs	0.071				1.26		0.52		0.047		0.139		0.17		0.045		0.077		0.55		0.44		0.10		0.10	
	SVOCs																									
3- and 4-Methylphenol Coelution	0.3	J	0.23	J	0.051	U	0.49		0.089	J	0.051	U	0.48	U	0.220	J	0.120	J	0.2	J	0.2	J	0.051	U	0.051	U
Dibenzofuran	0.01	J	0.014	U	0.014	U	0.02	J	0.014	U	0.014	U	0.01	U	0.019	J	0.014	U	0.13		0.11		0.11	J	0.01	U
Butyl Benzyl Phthalate	0.1	J	0.19	J	0.20		0.1	J	0.05	J	0.076	J	0.08	J	0.092	J	0.089	J	0.05	J	0.04	J	0.14	J	0.10	J
Di-n-octyl Phthalate	0.003	U	0.032	U	0.032	U	0.003	U	0.032	U	0.11	J	0.95	U	0.033	U	0.032	U	0.95	U	0.96	U	0.032	U	0.032	U

TABLE 8
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene	Naphthalene
EX-1	Water	05/02/97	0.5 U	0.5 U	**1.8**	0.5 U	0.5 U	**4.4**	**9.9**	**5.9**	**240**	0.5 U	**410**	0.5 U	**3300**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1 Duplicate	Water	05/02/97	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	**3.9**	**8.3**	**5.2**	**270**	0.5 U	**470**	0.5 U	**3600**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	02/04/99	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**120**	50 U	**220**	50 U	**2600**	50 U	50 U	50 U	50 U	200 U	200 U	200 U	200 U	200 U
EX-1 Duplicate	Water	02/04/99	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**130**	50 U	**250**	50 U	**3000**	50 U	50 U	50 U	50 U	200 U	200 U	200 U	200 U	200 U
EX-1	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.53**	0.5 U	0.5 U	**9.1**	0.5 U	**20**	0.5 U	**400 D**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	03/07/02	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	**3.2 D**	2.5 U	2.5 U	**13 D**	2.5 U	**32 D**	2.5 U	**480 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	10/03/02	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	**11**	2.5 U	**25**	2.5 U	**340 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	02/11/04	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	**22 D**	2.5 U	**82 D**	2.5 U	**1700 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1 Duplicate	Water	02/11/04	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	**24 D**	2.5 U	**89 D**	2.5 U	**1700 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	10/22/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	**4.1 D**	1.3 U	**19 D**	1.3 U	**740 D**	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
EX-2	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	02/03/99	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	**0.65**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	02/13/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	10/04/02	0.5 U	0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	Water	05/02/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**2.9**	0.5 U	0.5 U	0.5 U	**2.6**	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	Water	02/04/99	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**3.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 8
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene	Naphthalene
EX-7	Water	05/02/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	05/01/97	0.5 U	0.5 U	**0.9**	0.5 U	0.5 U	**7.4**	**0.7**	**12.0**	**8.0**	0.5 U	**28.0**	0.5 U	**110**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.8**	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.53**	0.5 U	0.5 U	**0.56**	0.5 U	**3.5**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**9.7**	0.5 U	0.5 U	0.5 U	0.5 U	**3.2**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.6**	0.5 U	0.5 U	0.5 U	**0.9**	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.58**	**2.2**	0.5 U	0.5 U	0.5 U	**5.2**	0.5 U	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.87**	0.5 U	0.5 U	**0.67**	0.5 U	**2.8**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1 Duplicate	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.88**	0.5 U	0.5 U	**0.65**	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	05/01/97	**5.9**	**0.5**	0.5 U	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7 Total	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	02/04/99	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	12/20/00	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	03/07/02	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3 Duplicate	Water	03/07/02	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	10/03/02	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.5**	**4.9**	0.5 U	0.5 U	0.5 U	**8.1**	0.5 U	**11.0**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**4.4**	0.5 U	0.5 U	0.5 U	**2.0**	0.5 U	**2.5**	**1.9**	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	12/20/00	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	03/07/02	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	10/03/02	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.59**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5 Duplicate	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 8
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene	Naphthalene
MW-6	Water	10/25/01	5 U	2.5 U	2.5 U	50 U	**2.8**	**6.4**	**422**	2.5 U	**7.45**	5 U	**20.5**	5 U	**23**	2.5 U	5 U	10 U	5 U	10.0 U	5.0 U	2.5 U	25 U	10 U
MW-6 Duplicate	Water	10/25/01	5 U	2.5 U	2.5 U	50 U	**2.6**	**6.9**	**411**	2.5 U	**7.65**	5 U	**20.6**	5 U	**21.2**	2.5 U	5 U	10 U	5 U	10.0 U	5.0 U	2.5 U	25 U	10 U
MW-6	Water	03/08/02	**5.6 D**	2.5 U	**3.8 D**	2.5 U	**4.0 D**	**11.0 D**	**700 D**	2.5 U	**22 D**	2.5 U	**200 D**	2.5 U	**360 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-6	Water	10/03/02	**11.0 D**	1.3 U	**2.9 D**	1.3 U	**3.8 D**	**7.5 D**	**770 D**	1.3 U	**7.7 D**	1.3 U	**33 D**	1.3 U	**40 D**	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6 Duplicate	Water	10/03/02	**12.0 D**	1.3 U	**3.0 D**	1.3 U	**3.9 D**	**7.8 D**	**740 D**	1.3 U	**8.0 D**	1.3 U	**36 D**	1.3 U	**43 D**	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	Water	02/12/04	**11.0 D**	1.3 U	**2.5 D**	1.3 U	**3.6 D**	**4.5 D**	**630 D**	1.3 U	**7.6 D**	1.3 U	**71 D**	1.3 U	**70 D**	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	Water	10/21/04	**14.0 D**	2.5 U	**3.4 D**	2.5 U	**4.4 D**	**3.8 D**	**780 D**	2.5 U	**6.4 D**	2.5 U	**55 D**	2.5 U	**62 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-7	Water	10/25/01	1.0 U	0.5 U	0.5 U	10.0 U	0.5 U	0.5 U	**2.9**	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	0.5 U	5.0 U	2.0 U
MW-7	Water	03/08/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	**3.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.5**	0.5 U	0.5 U	0.5 U	0.5 U	**2.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	02/12/04	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7 Duplicate	Water	02/12/04	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	10/21/04	**0.78**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/25/01	1.0 U	0.5 U	0.5 U	10.0 U	0.5 U	0.5 U	**1.21**	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	0.5 U	5.0 U	2.0 U
MW-8	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9 Duplicate	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.57**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	02/13/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.66**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-11	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	0.5 U	**1.6**	0.5 U	0.5 U	**4.7**	**3.1**	**8.2**	**4.2**	**6.1**	**4.5**	**2.4**	2.0 U
MW-11	Water	03/08/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.2**	0.5 U	**1.1**	0.5 U	0.5 U	**2.9**	**2.3**	**5.2**	**3.6**	**5.2**	**3.3**	**2.3**	2.0 U
MW-12	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.52**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	**4.8**
MW-13	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13 Duplicate	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 8
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene	Naphthalene
MW-14	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-14	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = Reported result is from a dilution

Table 9
Metals
Groundwater and Stormwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic		Cadmium	Chromium		Copper
Monitoring Wells - Groundwater µg/L (ppb)									
EX-1	Total	Water	02/11/04	3.0					
EX-1 Duplicate	Total	Water	02/11/04	2.6					
EX-1	Dissolved	Water	02/11/04	1.6					
EX-1 Duplicate	Dissolved	Water	02/11/04	1.4					
EX-1	Total	Water	10/22/04	2.6					
EX-1	Dissolved	Water	10/22/04	1.9					
EX-2	Total	Water	02/11/04	57.1					
EX-2	Dissolved	Water	02/11/04	65.8					
EX-2	Total	Water	10/21/04	64.6					
EX-2	Dissolved	Water	10/21/04	72.4					
EX-3	Total	Water	02/12/04	87.2					
EX-3	Dissolved	Water	02/12/04	86.1					
EX-3	Total	Water	10/21/04	90.0					
EX-3	Dissolved	Water	10/21/04	90.2					
EX-4/MW-2	Dissolved	Water	12/20/00	8.8			8.1		2.0
EX-4/MW-2	Total	Water	03/07/02	56.8			5.8		7.7
EX-4/MW-2	Dissolved	Water	03/07/02	47.5			2.4		0.6
EX-4/MW-2	Dissolved	Water	10/03/02	14.9			0.4		2.5
EX-4/MW-2	Total	Water	02/13/04	53.1					
EX-4/MW-2	Dissolved	Water	02/13/04	55.2					
EX-4/MW-2	Total	Water	10/22/04	63.9					
EX-4/MW-2	Dissolved	Water	10/22/04	48.3					
EX-7	Total	Water	02/12/04	0.5					
EX-7	Dissolved	Water	02/12/04	0.5	U				
EX-7	Total	Water	10/21/04	0.6					
EX-7 Duplicate	Total	Water	10/21/04	0.5	U				
EX-7	Dissolved	Water	10/21/04	0.5	U				
EX-7 Duplicate	Dissolved	Water	10/21/04	0.5	U				
MW-1	Dissolved	Water	12/20/00	2.50	U		9.5		514
MW-1	Total	Water	03/07/02	0.80			1.9		139
MW-1	Dissolved	Water	03/07/02	1.00	U		2.0		130
MW-1	Dissolved	Water	10/03/02	0.8			0.3		196
MW-1	Total	Water	02/11/04	0.6			1.2		82.8
MW-1	Dissolved	Water	02/11/04	0.6			0.7		70.8
MW-1	Total	Water	10/22/04	0.9			0.2	U	242
MW-1 Duplicate	Total	Water	10/22/04	1.0			0.2	U	245
MW-1	Dissolved	Water	10/22/04	1.0			0.2	U	250
MW-1 Duplicate	Dissolved	Water	10/22/04	0.9			0.2	U	246

Table 9
Metals
Groundwater and Stormwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Cadmium		Chromium		Copper	
MW-3	Dissolved	Water	12/20/00	39.7	0.10	U	0.4	U	0.5	
MW-3	Total	Water	03/07/02	42.8			6.4		11.0	
MW-3 Duplicate	Total	Water	03/07/02	41.6			6.7		7.8	
MW-3	Dissolved	Water	03/07/02	43.4			5.7		1.3	
MW-3 Duplicate	Dissolved	Water	03/07/02	43.4			2.5		0.7	
MW-3	Dissolved	Water	10/03/02	49			0.7		0.9	
MW-3	Total	Water	02/11/04	46.9			2.5		1.8	
MW-3	Dissolved	Water	02/11/04	46.1			2.4		0.4	
MW-3	Total	Water	10/22/04	48.8			0.5		0.6	
MW-3	Dissolved	Water	10/22/04	49.1			0.2		0.4	
MW-4	Dissolved	Water	12/20/00	12.7			1.00	U	1.00	U
MW-4	Total	Water	03/07/02	9.2			8.70		29.90	
MW-4	Dissolved	Water	03/07/02	10.0			3.30		1.20	
MW-4	Dissolved	Water	10/03/02	16.5			0.20	U	0.70	
MW-5	Total	Water	02/11/04	15.7						
MW-5	Dissolved	Water	02/11/04	15.4						
MW-5	Total	Water	10/22/04	24.6						
MW-5	Dissolved	Water	10/22/04	19.5						
MW-6	Total	Water	10/25/01	29.8			67.8		98.8	
MW-6 Duplicate	Total	Water	10/25/01	27.3			35.0		48.6	
MW-6	Dissolved	Water	10/25/01	18.2			1.00	U	2.00	U
MW-6 Duplicate	Dissolved	Water	10/25/01	19.0			1.00	U	2.00	U
MW-6	Total	Water	03/08/02	6.8			9.6		18.3	
MW-6	Dissolved	Water	03/08/02	20.4			0.80		2.5	
MW-6	Dissolved	Water	10/03/02	23.5			0.20		0.6	
MW-6 Duplicate	Dissolved	Water	10/03/02	23.3			0.30		0.9	
MW-6	Total	Water	02/12/04	22.6						
MW-6	Dissolved	Water	02/12/04	22.6						
MW-6	Total	Water	10/21/04	22.4						
MW-6	Dissolved	Water	10/21/04	23.1						
MW-7	Total	Water	10/25/01	18.1			127		164	
MW-7	Dissolved	Water	10/25/01	3.04			1.00	U	2.00	U
MW-7	Total	Water	03/08/02	4.4			9.1		19.1	
MW-7	Dissolved	Water	03/08/02	3.5			2.3		1.3	
MW-7	Dissolved	Water	10/04/02	9.1			2.1		0.7	
MW-7	Total	Water	02/12/04	5			0.7		0.5	
MW-7 Duplicate	Total	Water	02/12/04	5			0.8		0.4	
MW-7	Dissolved	Water	02/12/04	5.1			2.0		0.3	
MW-7 Duplicate	Dissolved	Water	02/12/04	5.1			0.7		0.3	
MW-7	Total	Water	10/21/04	5.1			1.1		0.1	U
MW-7	Dissolved	Water	10/21/04	6.3			1.1		0.1	U

Table 9
Metals
Groundwater and Stormwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Cadmium	Chromium	Copper
MW-8	Total	Water	10/25/01	43.9		225	394
MW-8	Dissolved	Water	10/25/01	2.33		1.00 U	2.00 U
MW-8	Total	Water	03/07/02	4.3		14.7	36.1
MW-8	Dissolved	Water	03/07/02	8.6		2.9	1.3
MW-8	Dissolved	Water	10/04/02	9.6		1.4	0.3
MW-8	Total	Water	02/12/04	5.4		1.7	2.0
MW-8	Dissolved	Water	02/12/04	5.6		0.8	0.2
MW-8	Total	Water	10/21/04	10.1		3.1	3.8
MW-8	Dissolved	Water	10/21/04	10.3		1.0	0.1 U
MW-9	Total	Water	02/13/04	18.3			
MW-9	Dissolved	Water	02/13/04	19.0			
MW-9	Total	Water	10/22/04	28.5			
MW-9	Dissolved	Water	10/22/04	30.7			
MW-10	Total	Water	02/13/04	30.9			
MW-10	Dissolved	Water	02/13/04	28.9			
MW-10	Total	Water	10/21/04	32.8			
MW-10	Dissolved	Water	10/21/04	34.2			
MW-12	Total	Water	02/13/04	23.3			
MW-12	Dissolved	Water	02/13/04	23.7			
MW-12	Total	Water	10/21/04	27.4			
MW-12	Dissolved	Water	10/21/04	28.2			
MW-14	Total	Water	02/12/04	1.5		1.3	1.7
MW-14	Dissolved	Water	02/12/04	1.5		2.6	1.3
MW-14	Total	Water	10/21/04	2.7		0.6	2.4
MW-14	Dissolved	Water	10/21/04	1.5		0.5	2.1
MW-15	Total	Water	02/12/04	3.5			
MW-15	Dissolved	Water	02/12/04	3.4			
MW-15	Total	Water	10/22/04	7.6			
MW-15	Dissolved	Water	10/22/04	6.2			

Note: U = not detected at method reporting limit. µg/L = micrograms per liter. ppb = parts per billion.

Table 10
Total Petroleum Hydrocarbons
Upland Soil and Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location	Matrix	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Geoprobe Borings - Soil mg/kg (ppm)								
GP-4 10-12	Soil	12/11/00	39	H	220	F	200	F
GP-7 2-4	Soil	12/14/00	10	U	5500	DH	4100	DL
GP-9 10-12	Soil	12/12/00	290	H	12000	H	10000	F
GP-14 0-2	Soil	12/13/00	10	U	14	F	55	F
GP-14 2-4	Soil	12/13/00	10	U	10	U	25	U
GP-14 20-22	Soil	12/13/00	10	U	30	Y	110	Y
GP-15 0-2	Soil	12/13/00	10	U	10	U	30	Z
GP-15 2-4	Soil	12/13/00	10	U	10	U	31	Z
GP-15 20-22	Soil	12/13/00	10	U	78	F	160	Z
GP-16 0-2	Soil	12/13/00	10	U	10	U	49	F
GP-16 2-4	Soil	12/13/00	10	U	10	U	25	U
GP-16 16-18	Soil	12/13/00	10	U	33	H	85	Y
GP-17 0-2	Soil	12/13/00	10	U	13	H	84	F
GP-17 2-4	Soil	12/13/00	10	U	10	U	25	U
GP-17 12-14	Soil	12/13/00	10	U	16	H	160	O
GP-18 0-2	Soil	12/13/00	10	U	21	H	210	F
GP-18 2-4	Soil	12/13/00	10	U	10	U	25	U
GP-18 16-18	Soil	12/13/00	10	U	10	U	38	F
GP-19 0-2	Soil	12/13/00	10	U	10	U	25	U
GP-19 2-4	Soil	12/13/00	10	U	68	H	160	L
GP-19 16-18	Soil	12/13/00	10	U	10	U	25	U
GP-20 2-4	Soil	12/13/00	10	U	10	U	25	U
GP-20 16-18	Soil	12/13/00	10	U	10	U	25	U
GP-22 10-12	Soil	02/09/01	17	H	310	F	160	Y
GP-23 16-18	Soil	02/09/01	10	U	80	H	220	Y
GP-24 12-14	Soil	02/09/01	10	U	74	H	130	Y
GP-24 16-18	Soil	02/09/01	10	U	65	H	180	Y
GP-25 10-12	Soil	02/09/01	10	U	72	H	250	Y
GP-25 14-16	Soil	02/09/01	10	U	65	H	160	Y
GP-26 14-16	Soil	02/09/01	10	U	68	H	170	Y
GP-26 18-20	Soil	02/09/01	10	U	10	U	25	U
GP-27 10-12	Soil	02/12/01	10	U	10	U	48	Y
GP-28 12-14	Soil	02/12/01	10	U	10	U	25	U
GP-29 4-6	Soil	02/12/01	710	H	18000	H	36000	F
GP-30 4-6	Soil	02/12/01	500	U	4200	H	1700	F
GP-31 14-16	Soil	02/13/01	6300	DH	35000	DH	38000	DF
GP-32 10-12	Soil	02/13/01	10	U	10	U	29	F
GP-33 16-18	Soil	02/13/01	10	U	130	H	280	Y
GP-34 12-14	Soil	02/13/01	10	U	48	H	160	Y
GP-35 10-12	Soil	02/13/01	10	U	25	H	55	Y
GP-36 12-14	Soil	02/13/01	18	H	240	H	430	Y
GP-38 10-12	Soil	02/14/01	47	H	930	Y	440	Y
GP-48 10-12	Soil	11/14/01	20	U	1420		1300	
GP-49 10-12	Soil	11/14/01	20	U	128		171	
GP-50 10-12	Soil	11/14/01	20	U	265		543	
Catch Basins - Sediment mg/kg (ppm)								
S-1	Soil	12/15/00	26	Y	400	H	1900	O
S-2	Soil	12/15/00	21	Y	300	H	2200	DO
S-3	Soil	12/15/00	580	Y	2400	H	7600	DO
S-3	Soil	11/04/04	210	U	1600	JH	8500	JO
S3-01C	Soil	12/15/00	10	U	10	U	30	Y

Notes: U = Not detected at method reporting limit. F = Fingerprit of the sample matches the elution pattern of calibration standard
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.
Z = The fingerprint does not resemble a petroleum product.
D = The reported result is from a dilution.

TABLE 11
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

Sample Designation	GP-4 10-12		GP-7 2-4		GP-9 10-12		GP-14 0-2		GP-14 2-4		GP-14 20-22		GP-15 0-2		GP-15 2-4		GP-15 20-22		GP-16 0-2		GP-16 2-4		GP-16 16-18	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Date Sampled	12/11/00		12/14/00		12/12/00		12/13/00		12/13/00		12/13/00		12/13/00		12/13/00		12/13/00		12/13/00		12/13/00		12/13/00	
	LPAHs																							
Naphthalene	110	U	40	JD	70	JD	7.5	U	7.4	U	25		1	J	7.9	U	150		1	J	7.9	U	27	
Acenaphthylene	110	U	83	U	160	U	0.7	J	0.5	J	6	J	0.5	J	7.9	U	40		7.6	U	7.9	U	5	J
Acenaphthene	110	U	70	JD	80	JD	7.5	U	7.4	U	9.4	U	7.6	U	7.9	U	84		7.6	U	7.9	U	7	J
Fluorene	110	U	89	D	280	D	7.5	U	0.6	J	3	J	0.8	J	7.9	U	240		7.6	U	7.9	U	4	J
Phenanthrene	140	D	520	D	1800	D	7.5	U	7.4	U	55		13		7.9	U	1300	D	3	J	7.9	U	36	
Anthracene	10	JD	140	D	210	D	0.9	J	0.7	J	8	J	2	J	7.9	U	65		7.6	U	7.9	U	8	J
2-Methylnaphthalene	110	U	380	D	420	D	0.6	J	0.5	J	9.9		1	J	7.9	U	64		1	J	0.8	J	8	J
Total LPAH	150		1239		2860		2.2		2.3		106.9		18.3				1943		5		0.8		95	
	HPAHs																							
Fluoranthene	70	JD	83	U	310	D	6	J	2	J	94		34		7.9	U	330		8	J	1	J	30	
Pyrene	160	D	83	U	1200	D	7	J	2	J	130		29		0.7	J	390		7	J	1	J	89	
Benz(a)anthracene	80	JD	240	D	330	D	4	J	1	J	40		17		7.9	U	110		5	J	0.9	J	38	
Chrysene	100	JD	740	D	1300	D	7	J	1	J	63		28		0.7	J	130		7	J	1	J	48	
Benzo(b)fluoranthene	50	JD	83	U	160	U	5	J	1	J	56		25		0.7	J	96		6	J	1	J	30	
Benzo(k)fluoranthene	40	JD	83	U	160	U	5	J	1	J	46		22		0.9	J	97		6	J	2	J	33	
Benzo(a)pyrene	80	JD	70	JD	210	D	6	J	0.8	J	76		24		0.7	J	160		5	J	1	J	44	
Indeno(1,2,3-cd)pyrene	60	JD	30	JD	60	JD	6	J	1	J	89		24		1	J	130		7	J	2	J	28	
Dibenz(a,h)anthracene	20	JD	20	JD	20	JD	1	J	15	U	10	J	5	J	0.7	J	20	J	1	J	16	U	4	J
Benzo(g,h,i)perylene	70	JD	60	JD	100	JD	8	J	2	J	100		23		1	J	140		8	J	2	J	33	
Total HPAHs	730		1160		3530		55		42		704		231		6		1603		60		12		377	
	SVOCs																							
3- and 4-Methylphenol Coelution	2200	U	1700	U	3300	U	150	U	150	U	190	U	150	U	160	U	60	J	150	U	160	U	180	U
Dibenzofuran	110	U	20	JD	80	JD	0.6	J	0.7	J	2.0	J	0.8	J	7.9	U	47		7.6	U	7.9	U	2	J
Butyl Benzyl Phthalate	220	U	170	U	930	D	15	U	15	U	19	U	4	J	16	U	26	U	0.7	J	16	U	18	U
Di-n-octyl Phthalate	2200	U	1700	U	3300	U	150	U	150	U	190	U	150	U	160	U	260	U	150	U	160	U	180	U

NOTE: µg/kg = micrograms per kilogram or part per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 11
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

Sample Designation	GP-17 0-2		GP-17 2-4		GP-17 12-14		GP-18 0-2		GP-18 2-4		GP-18 16-18		GP-19 0-2		GP-19 2-4		GP-19 16-18		GP-20 2-4		GP-20 16-18		GP-22 10-12		GP-23 16-18		GP-24 12-14		GP-24 16-18	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Date Sampled	12/13/00		12/13/00		12/13/00		12/14/00		12/14/00		12/14/00		12/14/00		12/14/00		12/14/00		12/14/00		12/14/00		02/09/01		02/09/01		02/09/01		02/09/01	
															LPAHs															
Naphthalene	7.4	U	7.5	U	26		7.6	U	7.6	U	7.3	U	7.3	U	6	J	2	J	2	J	7.1	U	47		32		36		18	
Acenaphthylene	7.4	U	0.6	J	7.0	J	7.6	U	7.6	U	0.5	J	7.3	U	0.8	J	0.8	J	0.4	J	7.1	U	5	J	10		5	J	3	J
Acenaphthene	7.4	U	7.5	U	8.7	U	7.6	U	7.6	U	7.3	U	7.3	U	7.4	U	7.1	U	7.5	U	7.1	U	27		9	J	8	J	22	
Fluorene	7.4	U	7.5	U	4	J	7.6	U	7.6	U	0.6	J	7.3	U	0.9	J	0.7	J	7.5	U	7.1	U	82		8	J	8	J	6	J
Phenanthrene	7.4	U	7.5	U	37		7.6	U	7.6	U	4	J	7.3	U	4	J	7.1	U	4	J	7.1	U	180		66		47		37	
Anthracene	7.4	U	0.6	J	6	J	7.6	U	7.6	U	1	J	7.3	U	1	J	0.7	J	1	J	7.1	U	11		16		10		7	J
2-Methylnaphthalene	7.4	U	2	J	6	J	0.5	J	7.6	U	0.6	J	7.3	U	1	J	0.7	J	0.8	J	7.1	U	160		13		19		4	J
Total LPAH			3.2		86		0.5				6.7				13.7		4.9		8.2				512		154		133		97	
															HPAHs															
Fluoranthene	5	J	7	J	63		6	J	2	J	9.4		2	J	4	J	0.9	J	6	J	2	J	49		120		54		34	
Pyrene	4	J	8.8		68		6	J	2	J	11		2	J	5	J	2	J	7	J	4	J	63		150		70		54	
Benz(a)anthracene	3	J	4	J	29		3	J	1	J	6	J	2	J	3	J	0.5	J	3	J	2	J	18		30		15		13	
Chrysene	5	J	7	J	36		6	J	2	J	11		2	J	4	J	0.6	J	5	J	3	J	24		39		19		18	
Benzo(b)fluoranthene	4	J	4	J	28		5	J	1	J	8.4		2	J	4	J	7.1	U	3	J	1	J	19		28		13		9.5	
Benzo(k)fluoranthene	3	J	5	J	31		4	J	2	J	5	J	2	J	4	J	0.7	J	4	J	1	J	15		27		12		11	
Benzo(a)pyrene	4	J	5	J	37		4	J	1	J	6	J	2	J	5	J	0.6	J	4	J	2	J	21		38		17		15	
Indeno(1,2,3-cd)pyrene	5	J	5	J	28		5	J	1	J	6	J	2	J	7	J	0.8	J	3	J	1	J	25		27		12		11	
Dibenz(a,h)anthracene	1	J	0.8	J	5	J	1	J	15	U	2	J	1	J	1	J	0.7	J	0.9	J	14	U	4	J	5	J	3	J	2	J
Benzo(g,h,i)perylene	6	J	6	J	27		5	J	1	J	7	J	2	J	7	J	0.9	J	4	J	3	J	23		32		14		12	
Total HPAHs	40		53		352		45		13		71.8		19		44		7.7		40		19		261		496		229		180	
															SVOCs															
3- and 4-Methylphenol Coelution	150	U	150	U	170	U	150	U	150	U	150	U	150	U	150	U	140	U	150	U	140	U	96	U	60	J	110		90	U
Dibenzofuran	7.4	U	7.5	U	2	J	7.6	U	7.6	U	0.5	J	7.3	U	1	J	0.9	J	0.5	J	7.1	U	32		6	J	4	J	2	J
Butyl Benzyl Phthalate	1	J	15	U	17	U	1	J	15	U	3	J	1	J	15	U	14	U	15	U	14	U	9.6	U	10.0	U	9.9	U	9.0	U
Di-n-octyl Phthalate	150	U	150	U	2	J	150	U	150	U	5	J	0.8	J	150	U	140	U	150	U	140	U	9.6	U	10.0	U	9.9	U	9.0	U

NOTE: µg/kg = micrograms per kilogram or part per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 11
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

Sample Designation	GP-25 10-12		GP-25 14-16		GP-26 14-16		GP-26 18-20		GP-27 10-12		GP-28 12-14		GP-29 4-6		GP-30 4-6		GP-31 14-16		GP-32 10-12		GP-33 16-18		GP-34 12-14		GP-35 10-12		GP-36 12-14		GP-38 10-12	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Date Sampled	02/09/01		02/09/01		02/09/01		02/09/01		02/12/01		02/12/01		02/12/01		02/12/01		02/13/01		02/13/01		02/13/01		02/13/01		02/13/01		02/13/01		02/14/01	
															LPAHs															
Naphthalene	67		100		61		15		8		7.2	U	870	D	150	U	4300	D	7.1	U	12		56		4	J	54		800	D
Acenaphthylene	17		15		8	J	1	J	0.9	J	7.2	U	380	U	150	U	1500	U	7.1	U	3	J	9.8		4	J	9	J	83	
Acenaphthene	15		25		17		8.4	U	7.6	U	7.2	U	1000	D	150	U	5500	D	7.1	U	8	U	10		7.7	U	9.4		200	
Fluorene	18		21		14		2	J	1	J	7.2	U	1500	D	10	JD	12000	D	0.5	J	4	J	13		3	J	10		130	
Phenanthrene	110		150		83		11		7		7.2	U	3900	D	40	JD	37000	D	6	J	22		79		20		67		590	D
Anthracene	28		30		19		2	J	2	J	7.2	U	1100	D	20	JD	6300	D	7.1	U	5	J	17		4	J	13		110	
2-Methylnaphthalene	30		38		24		5	J	2	J	7.2	U	13000	D	20	JD	190000	D	2	J	5	J	21		3	J	19		200	
Total LPAH	285		379		226		36		21				21370		90		255100		9		51		206		38		181		2113	
															HPAHs															
Fluoranthene	160		160		86		12		6	J	7.2	U	1100	D	20	JD	2400	D	4	J	24		93		30		70		540	D
Pyrene	190		190		120		15		10		7.2	U	6800	D	80	JD	16000	D	5	J	34		120		38		95		650	D
Benz(a)anthracene	58		57		44		5	J	4	J	7.2	U	1100	D	150	U	4200	D	2	J	8.5		29		10		29		120	
Chrysene	71		69		52		7	J	4	J	7.2	U	2600	D	100	JD	14000	D	6	J	13		41		13		37		150	
Benzo(b)fluoranthene	50		40		33		5	J	4	J	7.2	U	400	D	40	JD	1000	JD	3	J	9		31		12		25		94	
Benzo(k)fluoranthene	40		38		31		4	J	4	J	7.2	U	200	JD	10	JD	600	JD	2	J	8.4		24		12		25		87	
Benzo(a)pyrene	66		59		46		6	J	5	J	7.2	U	730	D	70	JD	2600	D	2	J	11		34		19		34		130	
Indeno(1,2,3-cd)pyrene	72		56		45		7	J	6	J	1	J	200	JD	40	JD	500	JD	2	J	7	J	23		14		25		78	
Dibenz(a,h)anthracene	9	J	9	J	8	J	1	J	1	J	7.2	U	100	JD	30	JD	400	JD	0.7	J	2	J	4	J	2	J	4	J	12	
Benzo(g,h,i)perylene	61		48		36		6	J	5	J	7.2	U	400	JD	60	JD	1000	JD	2	J	7	J	26		15		25		73	
Total HPAHs	777		726		501		68		49		1		13630		450		42700		29		124		425		165		369		1934	
															SVOCs															
3- and 4-Methylphenol Coelution	50	J	160		180		84	U	76	U	72	U	3800	U	1500	U	15000	U	71	U	80	U	95	U	77	U	80	J	1000	D
Dibenzofuran	11		11		9	J	2	J	0.8	J	7.2	U	380	U	6	JD	3000	D	7.1	U	2	J	8	J	0.8	J	6	J	45	
Butyl Benzyl Phthalate	9.9	U	9.8	U	9.9	U	8.4	U	2	J	7.2	U	380	U	150	U	1500	U	7.1	U	8.0	U	9.5	U	0.7	J	9.4	U	8.4	U
Di-n-octyl Phthalate	9.9	U	9.8	U	9.9	U	8.4	U	7.6	U	7.2	U	380	U	150	U	1500	U	7.1	U	8.0	U	9.5	U	7.7	U	9.4	U	8.4	U

TABLE 11
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

Sample Designation Matrix Date Sampled	S-1 Sediment 12/15/00	S-2 Sediment 12/15/00	S-3 Sediment 12/15/00	S-3 Sediment 11/04/04	S3-01C Sediment 12/15/00
			LPAHs		
Naphthalene	200 JD	50 JD	400 JD	64 JD	12 U
Acenaphthylene	40 JD	20 JD	60 JD	37 JU	12 U
Acenaphthene	200 JD	30 JD	720 U	26 JU	12 U
Fluorene	100 JD	20 JD	3600 D	72 JD	12 U
Phenanthrene	1500 D	320 D	3600 D	660 JD	12 U
Anthracene	400 JD	50 JD	2600 D	140 JD	12 U
2-Methylnaphthalene	100 JD	50 JD	400 JD	31 JU	0.6 J
Total LPAH	2540	540	10660	936	0.6
			HPAHs		
Fluoranthene	2600 D	690 D	5800 D	1400 JD	3 J
Pyrene	2600 D	770 D	5500 D	1200 JD	3 J
Benz(a)anthracene	1300 D	440 D	2500 D	400 JD	2 J
Chrysene	2000 D	740 D	5300 D	1100 JD	3 J
Benzo(b)fluoranthene	2000 D	780 D	4100 D	1100 JD	3 J
Benzo(k)fluoranthene	1500 D	540 D	3400 D	270 JD	2 J
Benzo(a)pyrene	1900 D	670 D	3700 D	490 JD	2 J
Indeno(1,2,3-cd)pyrene	1500 D	490 D	3200 D	530 JD	2 J
Dibenz(a,h)anthracene	300 JD	100 JD	800 JD	150 JD	24 U
Benzo(g,h,i)perylene	1600 D	500 D	3600 D	790 JD	3 J
Total HPAHs	17300	5720	37900	7430	23
			SVOCs		
3- and 4-Methylphenol Coelution	13000 U	1900 U	4000 JD	3000 JD	240 U
Dibenzofuran	100 JD	20 JD	200 JD	69 JD	12 U
Butyl Benzyl Phthalate	1500 D	2500 D	5000 D	930 JD	1 J
Di-n-octyl Phthalate	13000 U	1900 U	14000 U	11000 JD	2 J
	NOTE: µg/kg = micrograms per kilogram or part per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.				

Table 12
Metals
Upland Soil and Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location		Matrix	Date Sampled	Arsenic	Cadmium	Chromium	Copper	Lead	Zinc
Geoprobe Borings - Soil mg/kg (ppm)									
GP-4 10-12	Total	Soil	12/11/00	3.3		11.6	15.7		
GP-7 2-4	Total	Soil	12/14/00	2.9		13.3	16.8		
GP-9 10-12	Total	Soil	12/12/00	2.4		14.2	19.3		
GP-14 0-2	Total	Soil	12/14/00	2.2		13.1	17.4		
GP-14 2-4	Total	Soil	12/14/00	1.7		12.3	13.4		
GP-14 20-22	Total	Soil	12/14/00	4.6		14.5	19.0		
GP-15 0-2	Total	Soil	12/14/00	1.7		11.1	18.1		
GP-15 2-4	Total	Soil	12/14/00	1.8		12.7	14.7		
GP-15 20-22	Total	Soil	12/14/00	3.1		22.8	27.1		
GP-16 0-2	Total	Soil	12/14/00	1.6		10.9	15.4		
GP-16 2-4	Total	Soil	12/14/00	1.8		14.0	15.4		
GP-16 16-18	Total	Soil	12/14/00	3.2		12.9	20.7		
GP-17 0-2	Total	Soil	12/14/00	1.5		9.96	13.4		
GP-17 2-4	Total	Soil	12/14/00	1.8		11.9	14.6		
GP-17 12-14	Total	Soil	12/13/00	2.2		16.6	18.7		
GP-18 0-2	Total	Soil	12/14/00	1.3		8.88	13.7		
GP-18 2-4	Total	Soil	12/14/00	1.6		11.1	13.5		
GP-18 16-18	Total	Soil	12/14/00	2.5		12.6	16.9		
GP-19 0-2	Total	Soil	12/14/00	1.6		10.1	12.3		
GP-19 2-4	Total	Soil	12/14/00	1.9		12.9	15.0		
GP-19 16-18	Total	Soil	12/14/00	1.6		10.6	13.2		
GP-20 2-4	Total	Soil	12/14/00	1.6		11.1	14.2		
GP-20 16-18	Total	Soil	12/13/00	1.6		9.11	11.6		
Catch Basins - Sediment mg/kg (ppm)									
S-1	Total	Sediment	12/15/00	5.2	2	48.9	137	145	638
S-2	Total	Sediment	12/15/00	7.5	1.42	63.7	316	211	584
S-3	Total	Sediment	12/15/00	37.9	2.86	144	1050	454	985
S-3	Total	Sediment	11/04/04	25.6	1.9	189	1360	600	752
S3-01C	Total	Sediment	12/15/00	4.4	0.12	11.9	27.4	8.58	82.7

Note: U = not detected at method reporting limit. µg/kg = micrograms per kilogram. ppb = parts per billion.

TABLE 13
Shoreline Groundwater Comparison with Surface Water Screening Criteria (μg/L)
McCall Oil and Chemical

	Screening Levels																																
	Chronic WQC	Reference	Arithmetic Mean Concentration	EX-2 12/20/00		EX-2 03/07/02		EX-2 10/04/02		EX-2 02/12/04		EX-2 10/21/04		EX-3 12/20/00		EX-3 03/07/02		EX-3 10/04/02		EX-3 02/12/04		EX-3 10/21/04		EX-5 12/20/00		EX-5 03/07/02		EX-5 10/04/02		MW-5 12/20/00		MW-5 03/07/02		MW-5 10/03/02	
Low Molecular Weight PAHs																																	
Naphthalene	620	a	0.03	**0.01**	J	0.013	U	**0.022**	J	**0.023**	J	0.012	U	**0.02**	J	0.013	U	**0.038**	J	0.012	U	0.012	U	**0.009**	J	**0.028**	J	**0.022**	J	0.008	U	**0.034**	J	0.012	U
Acenaphthylene	307	b	0.01	0.006	U	0.011	U	0.011	U	0.011	U	0.011	U	0.006	U	0.011	U	0.011	U	0.011	U	0.011	U	0.006	U	0.011	U	0.011	U	0.006	U	0.011	U	0.011	U
Acenaphthene	520	a	0.08	**0.02**	J	**0.041**	J	**0.110**	J	**0.025**	J	**0.037**	J	**0.01**	J	0.0093	U	**0.023**	J	0.0088	U	0.0088	U	**0.009**	J	**0.024**	J	**0.015**	J	0.007	U	0.0094	U	0.0088	U
Fluorene	39	b	0.07	0.006	U	0.013	U	0.012	U	0.012	U	0.012	U	0.006	U	0.013	U	0.012	U	0.012	U	0.012	U	0.006	U	0.013	U	0.012	U	0.006	U	0.013	U	0.012	U
Phenanthrene	19	b	0.14	**0.04**	J	**0.047**	J	**0.057**	J	**0.039**	J	**0.021**	J	**0.04**	J	**0.06**	J	**0.06**	J	**0.028**	J	**0.016**	J	**0.02**	J	**0.034**	J	**0.039**	J	0.007	U	0.011	U	**0.021**	J
Anthracene	21	b	0.03	0.006	U	0.016	U	0.015	U	0.015	U	0.015	U	0.006	U	**0.019**	J	**0.016**	J	0.015	U	0.015	U	0.006	U	0.016	U	**0.017**	J	0.006	U	0.016	U	**0.025**	J
2-Methylnaphthalene	72	b	0.02	**0.008**	J	**0.012**	J	**0.017**	J	**0.013**	J	0.012	U	0.008	U	0.012	U	**0.015**	J	0.012	U	0.012	U	0.008	U	0.012	U	0.012	U	0.008	U	0.013	U	0.012	U
High Molecular Weight PAHs																																	
Fluoranthene	7.1	b	0.05	**0.009**	J	**0.017**	J	0.013	U	0.013	U	0.013	U	**0.01**	J	**0.038**	J	**0.034**	J	0.013	U	0.013	U	**0.009**	J	0.013	U	0.013	U	0.007	U	0.014	U	**0.031**	J
Pyrene	10.1	b	0.08	**0.03**	J	**0.039**	J	**0.074**	J	**0.036**	J	**0.032**	J	**0.03**	J	**0.064**	J	**0.061**	J	**0.028**	J	**0.030**	J	**0.040**	J	**0.046**	J	**0.067**	J	0.007	U	**0.024**	J	**0.037**	J
Benz(a)anthracene	2.2	b	0.02	**0.007**	J	0.013	U	0.012	U	0.012	U	0.012	U	**0.008**	J	0.013	U	0.012	U	0.012	U	0.012	U	**0.006**	J	0.013	U	0.012	U	0.005	U	0.013	U	**0.030**	J
Chrysene	2.0	b	0.03	**0.007**	J	0.015	U	0.014	U	0.014	U	0.014	U	**0.01**	J	0.015	U	0.014	U	0.014	U	0.014	U	**0.008**	J	0.015	U	0.014	U	0.006	U	0.015	U	**0.022**	J
Benzo(b)fluoranthene	0.68	b	0.02	**0.006**	J	0.021	U	0.020	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U	0.020	U	0.005	U	0.021	U	0.020	U	0.005	U	0.021	U	0.020	U
Benzo(k)fluoranthene	0.64	b	0.01	**0.006**	J	0.021	U	0.020	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U	0.020	U	**0.003**	J	0.021	U	0.020	U	0.003	U	0.021	U	0.020	U
Benzo(a)pyrene	0.96	b	0.02	**0.007**	J	0.017	U	0.016	U	0.016	U	0.016	U	**0.007**	J	0.017	U	0.016	U	0.016	U	0.016	U	0.006	U	0.017	U	0.016	U	0.006	U	0.018	U	0.016	U
Indeno(1,2,3-cd)pyrene	0.28	b	0.02	**0.009**	J	0.026	U	0.024	U	0.024	U	0.024	U	**0.009**	J	0.026	U	0.024	U	0.024	U	0.024	U	**0.007**	J	0.026	U	0.024	U	0.004	U	0.026	U	0.024	U
Dibenz(a,h)anthracene	0.28	b	0.01	**0.005**	J	0.033	U	0.031	U	0.031	U	0.031	U	0.004	U	0.033	U	0.031	U	0.031	U	0.031	U	0.004	U	0.033	U	0.031	U	0.004	U	0.033	U	0.031	U
Benzo(g,h,i)perylene	0.44	b	0.03	**0.01**	J	0.018	U	0.017	U	0.017	U	0.017	U	**0.02**	J	**0.034**	J	**0.025**	J	0.017	U	0.017	U	**0.03**	J	**0.054**	J	**0.031**	J	0.005	U	0.018	U	0.017	U
Total PAHs			0.68																														
Miscellaneous Semivolatiles																																	
3- and 4-Methylphenol	--		0.12	**0.02**	J	0.055	U	0.051	U	0.051	U	0.051	U	**0.05**	J	**0.087**	J	**0.090**	J	0.051	U	0.051	U	**0.007**	J	0.055	U	0.051	U	0.003	U	0.055	U	0.051	U
Dibenzofuran	3.7	c	0.02	0.007	U	0.014	U	0.014	U	0.014	U	0.014	U	0.007	U	0.014	U	0.014	U	0.014	U	0.014	U	0.007	U	0.014	U	0.014	U	0.007	U	0.015	U	0.200	U
Butyl Benzyl Phthalate	3.0	a	0.02	0.02	U	0.028	U	0.026	U	0.026	U	0.026	U	0.02	U	0.028	U	0.026	U	0.026	U	0.026	U	0.02	U	0.028	U	0.026	U	0.02	U	0.028	U	**0.048**	J
Di-n-octyl Phthalate	3.0	a	0.01	0.003	U	0.035	U	0.032	U	0.032	U	0.032	U	0.003	U	0.035	U	0.032	U	0.032	U	0.032	U	0.003	U	0.035	U	0.032	U	0.003	U	0.035	U	0.014	U
Metals																																	
Arsenic - Total	--		26	--		--		--		**57**		**65**		--		--		--		**87**		**90**		--		--		--		--		--		--	
Arsenic - Dissolved	150	d	22	--		--		--		**66**		**72**		--		--		--		**86**		**90**		--		--		--		--		--		--	
Chromium - Total	--		35	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Chromium - Dissolved	24	d	1.4	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Copper - Total	--		57	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Copper - Dissolved	2.7	d	0.8	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
Volatile Organic Compounds																																	
1,2-Dichloroethylene(cis)	--		1.1	0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	21,900	a	0.25	0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	840	a	0.25	0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl Chloride	--		0.37	0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	--		--		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

Notes:
U = Not detected at indicated quantitation limit; J = Estimated concentration; Bold value = detected concentration
(a) DEQ 2004 AWQC
(b) EPA 2003 Final Chronic Values
(c) Oak Ridge National Lab Tier II Secondary Chronic Value
(d) EPA, 2004; National Recommended Water Quality Criteria
(e) City of Portland, 2004b, BES database transmittal on 1-30-04
(f) Fuhrer et al., 1996; DEQ, 2002; 90th percentile value for Lower Columbia Basin

TABLE 13
Shoreline Groundwater Comparison with Surface Water Screening Criteria (μg/L)
McCall Oil and Chemical

	Screening Levels: Chronic WQC	Screening Levels: Reference	Arithmetic Mean Concentration	MW-5 Dup 10/03/02	MW-5 02/11/04	MW-5 10/22/04	MW-7 10/25/01	MW-7 03/08/02	MW-7 10/04/02	MW-7 02/12/04	MW-7 Dup 02/12/04	MW-7 10/21/04	MW-8 10/25/01	MW-8 03/07/02	MW-8 10/04/02	MW-8 02/12/04	MW-8 10/21/04	MW-14 02/11/04	MW-14 10/21/04
Low Molecular Weight PAHs																			
Naphthalene	620	a	0.03	**0.023**	**0.025** J	0.012 U	5.00 U	**0.086** J	**0.020** J	0.012 U	0.012 U	0.012 U	5.00 U	**0.16** J	**0.38**	**0.031** J	0.012 U	**0.023** J	0.012 U
Acenaphthylene	307	b	0.01	0.011 U	0.011 U	0.011 U	5.00 U	**0.025** J	0.011 U	0.011 U	0.011 U	0.011 U	5.00 U	0.011 U	**0.210**	0.011 U	0.011 U	0.011 U	0.011 U
Acenaphthene	520	a	0.08	0.0088 U	0.0088 U	0.0088 U	5.00 U	0.0092 U	0.0088 U	0.0088 U	**0.045** J	**0.032** J	5.00 U	**0.58**	**0.78**	**0.34**	**0.21**	**0.0310** J	0.0088 U
Fluorene	39	b	0.07	0.012 U	0.012 U	0.012 U	5.00 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	5.00 U	**0.56**	**0.91**	**0.36**	**0.22**	0.012 U	0.012 U
Phenanthrene	19	b	0.14	**0.021** J	0.011 U	0.011 U	5.00 U	**0.077** J	**0.034** J	**0.024** J	**0.036** J	0.011 U	5.00 U	**1.2**	**1.7**	**0.22**	**0.22**	0.011 U	0.011 U
Anthracene	21	b	0.03	**0.022** J	0.015 U	0.015 U	5.00 U	**0.039** J	**0.031** J	**0.019** J	**0.029** J	0.015 U	5.00 U	**0.097** J	**0.380**	**0.028** J	0.015 U	0.015 U	0.015 U
2-Methylnaphthalene	72	b	0.02	0.012 U	0.012 U	0.012 U	5.00 U	**0.034** J	0.012 U	0.012 U	0.012 U	0.012 U	5.00 U	**0.081** J	**0.160** J	0.012 U	**0.0019** J	0.012 U	0.012 U
High Molecular Weight PAHs																			
Fluoranthene	7.1	b	0.05	**0.026** J	0.013 U	0.013 U	5.00 U	**0.061** J	0.013 U	0.013 U	0.013 U	0.013 U	5.00 U	**0.22**	**0.73**	**0.035** J	**0.048** J	0.013 U	0.013 U
Pyrene	10.1	b	0.08	**0.034** J	0.015 U	0.015 U	5.00 U	**0.089** J	**0.025** J	0.015 U	0.015 U	0.015 U	5.00 U	**0.34**	**1.10**	**0.066** J	**0.079** J	0.015 U	0.015 U
Benz(a)anthracene	2.2	b	0.02	0.012 U	0.012 U	0.012 U	5.00 U	**0.044** J	0.012 U	0.012 U	0.012 U	0.012 U	5.00 U	**0.071** J	**0.390**	0.012 U	0.012 U	0.012 U	0.012 U
Chrysene	2.0	b	0.03	0.014 U	0.014 U	0.014 U	5.00 U	**0.045** J	0.014 U	0.014 U	0.014 U	0.014 U	5.00 U	**0.16** J	**0.56**	0.014 U	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	0.68	b	0.02	0.020 U	0.020 U	0.020 U	5.00 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	5.00 U	**0.064** J	**0.350**	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	0.64	b	0.01	0.020 U	0.020 U	0.020 U	5.00 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	5.00 U	0.02 U	**0.13** J	0.02 U	0.02 U	0.020 U	0.020 U
Benzo(a)pyrene	0.96	b	0.02	0.016 U	0.016 U	0.016 U	5.00 U	0.017 U	0.016 U	0.016 U	0.016 U	0.016 U	5.00 U	**0.089** J	**0.360**	0.016 U	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.28	b	0.02	0.024 U	0.024 U	0.024 U	5.00 U	0.026 U	0.024 U	0.024 U	0.024 U	0.024 U	5.00 U	**0.04** J	**0.25**	0.02 U	0.02 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.28	b	0.01	0.031 U	0.031 U	0.031 U	5.00 U	0.032 U	0.031 U	0.031 U	0.031 U	0.031 U	5.00 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	0.44	b	0.03	0.017 U	0.017 U	0.017 U	5.00 U	**0.099** J	0.017 U	0.017 U	0.017 U	0.017 U	5.00 U	**0.057** J	**0.310**	0.017 U	0.017 U	0.017 U	0.017 U
Total PAHs			0.68																
Miscellaneous Semivolatiles																			
3- and 4-Methylphenol	--		0.12	0.051 U	0.051 U	0.051 U	5.00 U	**1.1**	0.05 U	0.051 U	0.051 U	0.051 U	5.00 U	**0.22** J	**1.60**	0.051 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	3.7	c	0.02	0.014 U	0.014 U	0.014 U	5.00 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	5.00 U	**0.18** J	0.014 U	**0.092** J	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	3.0	a	0.02	0.026 U	0.026 U	0.026 U	5.00 U	0.027 U	0.026 U	0.026 U	0.026 U	0.026 U	5.00 U	**0.13** J	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	3.0	a	0.01	0.014 U	0.032 U	0.032 U	5.00 U	0.034 U	0.032 U	0.032 U	0.032 U	0.032 U	5.00 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U
Metals																			
Arsenic - Total	--		26	--	**16**	**25**	**18**	**4.4**	--	**5.0**	**5.0**	**5.1**	**44**	**4.3**	--	**5.4**	**10.1**	**1.5**	**2.7**
Arsenic - Dissolved	150	d	22	--	**15**	**20**	**3.0**	**3.5**	**9.1**	**5.1**	**5.1**	**6.3**	**2.3**	**8.6**	**9.6**	**5.6**	**10.3**	**1.5**	**1.5**
Chromium - Total	--		35	--	--	--	**127**	**9.1**	--	**0.7**	**0.8**	**1.1**	**225**	**15**	--	**1.7**	**3.1**	**1.3**	**0.6**
Chromium - Dissolved	24	d	1.4	--	--	--	1.0 U	**2.3**	**2.1**	**2.0**	**0.7**	**1.1**	1.0 U	**2.9**	**1.4**	**0.8**	**1.0**	**2.6**	**0.5**
Copper - Total	--		57	--	--	--	**164**	**19.1**	--	**0.5**	**0.4**	0.1 U	**394**	**36**	--	**2.0**	**3.8**	**1.7**	**2.4**
Copper - Dissolved	2.7	d	0.8	--	--	--	2.0 U	**1.3**	**0.7**	**0.7**	**0.3**	0.1 U	2.0 U	**1.3**	**0.3**	**0.2**	0.1 U	**1.3**	**2.1**
Volatile Organic Compounds																			
1,2-Dichloroethylene(cis)	--		1.1	0.5 U	0.5 U	0.5 U	**2.9**	**2.1**	**2.5**	**5.2**	**5.3**	**3.2**	**1.2**	0.5 U	**1.1**	0.5 U	**1.2**	0.5 U	**1.0**
Trichloroethylene	21,900	a	0.25	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethylene	840	a	0.25	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	--		0.37	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	**1.4**	**1.4**	**0.8**	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
U = Not detected at indicated quantitation limit; J = Estimated concentration; Bold value = detected concentration
(a) DEQ 2004 AWQC
(b) EPA 2003 Final Chronic Values
(c) Oak Ridge National Lab Tier II Secondary Chronic Value
(d) EPA, 2002; National Recommended Water Quality Criteria
(e) City of Portland, 2004b, BES database transmittal on 1-30-04
(f) Fuhrer et al., 1996; DEQ, 2002; 90th percentile value for Lower Columbia Basin

TABLE 14
Comparison of Stormwater Data to Surface Water Criteria (μg/L)
McCall Oil and Chemical

	Screening Levels: Chronic WQC	Reference	COP Municipal Stormwater (e)	Willamette R. Background (f)	NPDES Permit Limits	Arithmetic Mean Concentration	S-1 12/20/00	S-1 03/06/02	S-1 04/07/05	S-2 12/20/00	S-2 03/06/02	S-2 04/07/05	S-3 12/20/00	S-3 03/06/02	S-3 04/07/05	S-4 12/20/00	S-4 Dup 12/20/00	S-4 04/09/02	S-4 04/07/05
Low Molecular Weight PAHs																			
Naphthalene	620	a	0.08			0.03	**0.03** J	**0.03** J	**0.031** J	**0.07** J	**0.025** J	0.012 U	**0.07** J	**0.025** J	0.012 U	**0.04** J	**0.04** J	0.012 U	0.012 U
Acenaphthylene	307	b	0.06			0.02	**0.006** J	0.011 U	**0.037** J	**0.02** J	0.011 U	**0.026** J	0.095 U	0.011 U	0.011 U	0.095 U	0.096 U	0.011 U	0.011 U
Acenaphthene	520	a	--			0.04	**0.02** J	0.0088 U	0.0088 U	**0.02** J	0.0092 U	0.0088 U	0.095 U	0.0089 U	0.0088 U	**0.14**	**0.12**	**0.085** J	0.0088 U
Fluorene	39	b	--			0.08	**0.02** J	0.012 U	**0.026** J	**0.04** J	0.013 U	0.012 U	**0.02** J	0.013 U	0.012 U	**0.36**	**0.34**	**0.17** J	0.012 U
Phenanthrene	19	b	0.08			0.14	**0.07** J	**0.032** J	**0.190** J	**0.25**	**0.043** J	**0.045** J	**0.20**	**0.054** J	**0.057** J	**0.46**	**0.35**	**0.073** J	**0.032** J
Anthracene	21	b	--			0.01	0.006 U	0.015 U	**0.039** J	**0.02** J	0.016 U	0.015 U	0.095 U	0.015 U	0.015 U	**0.02** J	**0.01** J	0.015 U	0.015 U
2-Methylnaphthalene	72	b	--			0.03	**0.03** J	**0.016** J	0.012 U	**0.05** J	**0.014** J	0.012 U	**0.096**	0.012 U	0.012 U	**0.09** J	**0.10**	0.012 U	0.012 U
High Molecular Weight PAHs																			
Fluoranthene	7.1	b	0.07			0.05	**0.02** J	0.013 U	**0.23**	**0.099**	**0.022** J	**0.059** J	**0.06** J	**0.023** J	**0.040** J	**0.06** J	**0.05** J	0.01 U	0.013 U
Pyrene	10.1	b	0.10			0.09	**0.02** J	0.015 U	**0.28**	**0.12**	**0.025** J	**0.059** J	**0.03** J	**0.022** J	**0.037** J	**0.19**	**0.16**	**0.10** J	**0.097** J
Benz(a)anthracene	2.2	b	--			0.02	0.005 U	0.012 U	**0.081** J	**0.03** J	0.013 U	0.012 U	**0.007** J	0.012 U	0.012 U	**0.03** J	**0.02** J	0.012 U	0.012 U
Chrysene	2.0	b	--			0.04	**0.008** J	0.014 U	**0.140** J	**0.06** J	0.015 U	0.014 U	**0.03** J	0.015 U	0.014 U	**0.12**	**0.09** J	0.014 U	0.014 U
Benzo(b)fluoranthene	0.68	b	--			0.03	**0.006** J	0.020 U	**0.15** J	**0.04** J	0.021 U	**0.021** J	**0.01** J	0.020 U	0.020 U	**0.03** J	**0.03** J	0.020 U	0.020 U
Benzo(k)fluoranthene	0.64	b	--			0.01	**0.004** J	0.020 U	**0.049** J	**0.03** J	0.021 U	0.020 U	**0.008** J	0.020 U	0.020 U	**0.02** J	**0.01** J	0.020 U	0.020 U
Benzo(a)pyrene	0.96	b	--			0.02	0.006 U	0.016 U	**0.10** J	**0.03** J	0.017 U	0.020 U	0.095 U	0.017 U	0.016 U	**0.03** J	**0.02** J	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.28	b	--			0.02	**0.006** J	0.024 U	**0.089** J	**0.04** J	0.026 U	0.020 U	**0.01** J	0.025 U	0.024 U	**0.02** J	**0.02** J	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.28	b	--			0.02	0.004 U	0.031 U	0.031 U	**0.009** J	0.032 U	0.020 U	0.19 U	0.031 U	0.031 U	**0.009** J	**0.008** J	0.031 U	0.031 U
Benzo(g,h,i)perylene	0.44	b	--			0.03	**0.007** J	0.017 U	**0.14** J	**0.06** J	0.018 U	0.020 U	**0.01** J	0.017 U	0.017 U	**0.04** J	**0.03** J	0.017 U	0.017 U
Total PAHs			0.94			0.68													
Miscellaneous Semivolatiles																			
3- and 4-Methylphenol	--					0.17	**0.3** J	**0.23** J	0.051 U	**0.49**	**0.089** J	0.051 U	0.48 U	**0.220** J	**0.120** J	**0.2** J	**0.2** J	0.051 U	0.051 U
Dibenzofuran	3.7	c				0.03	**0.01** J	0.014 U	0.014 U	**0.02** J	0.014 U	0.014 U	**0.01** U	**0.019** J	0.014 U	**0.13**	**0.11**	**0.11** J	0.014 U
Butyl Benzyl Phthalate	3.0	a				0.10	**0.1** J	**0.19** J	**0.20**	**0.1** J	**0.05** J	**0.076** J	**0.08** J	**0.092** J	**0.089** J	**0.05** J	**0.04** J	**0.14** J	**0.100** J
Di-n-octyl Phthalate	3.0	a				0.13	0.003 U	0.032 U	0.032 U	0.003 U	0.032 U	**0.11** J	0.95 U	0.033 U	0.032 U	0.95 U	0.96 U	0.032 U	0.032 U
Metals*																			
Arsenic - Total	--		4.5	2		0.3	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.5 U			**0.6**	**0.5**
Arsenic - Dissolved	150	d	4.0			0.3			0.5 U		0.5 U		1 U		0.5 U	0.5 U	0.5 U		0.5 U
Chromium - Total	--		14	1		1.7	**0.4**	**0.4**	**7.0**	**2.0**	**1.1**	**0.6**		**1.2**	**1.9**			**0.9**	**1.1**
Chromium - Dissolved	24	d	3			1.1			**1.3**		**0.7**		**2.9**		**1.3**	**0.8**	**0.6**		**0.2**
Copper - Total	--		25	9	100	8	**3.8**	**3.7**	**13.5**	**9.9**	**10.3**	**6.0**		**13**	**8.6**			**9.0**	**8.3**
Copper - Dissolved	2.7	d	9			10			**7.9**		**9.4**		**30**		**7.1**	**4.9**	**4.7**		**4.4**
Cadmium - Total	--		1.1	<1		0.4			**0.16**		**0.07**				**1.05**				**0.19**
Cadmium - Dissolved	0.094	d	0.6			0.3			**0.07**		**0.05**				**0.96**				**0.09**
Lead - Total	--		38	13	400	10			**27.1**		**2.33**				**4.14**				**6.15**
Lead - Dissolved	0.54	d	3			0.6			**0.61**		**0.7**				**1.06**				**0.09**
Zinc - Total	--		220	38	600	104			**86.9**		**51.1**				**189**				**89.80**
Zinc - Dissolved	36	d	113			80			**47.8**		**42.9**				**182**				**46.80**

Notes:
U = Not detected at indicated quantitation limit; J = Estimated concentration
* Metals criteria are dissolved basis; if no dissolved data available, metals are compared to total concentrations
(a) DEQ 2004 AWQC
(b) EPA 2003 Final Chronic Values
(c) Oak Ridge National Lab Tier II Secondary Chronic Value
(d) EPA, 2002; National Recommended Water Quality Criteria
(e) City of Portland, 2004b, BES database transmittal on 1-30-04
(f) Fuhrer et al., 1996; DEQ, 2002; 90th percentile value for Lower Columbia Basin

Table 15
Comparative Loading Analysis
McCall Portland Site

Input Parameters

Portland Annual Rainfall	37	inches[1]
Portland Metro Impervious Acreage	17,600	acres[1]
Portland Metro Impervious Runoff Coef.	0.75	unitless
McCall Total Acreage	36	acres
McCall Runoff Coefficient	0.75	unitless
McCall Mean Groundwater Gradient	0.025	ft/ft
McCall Mean Hydraulic Conductivitiy	0.013	ft/min
McCall Length of Shoreline	1,500	feet
McCall Saturated Fill Thickness	10	feet
Mean Annual Willamette River Dischg.	33,000	cfs[2]

Average Water Concentrations (µg/l)

	COP Municipal Stormwater[3]	Willamette R. Background[4]	McCall Stormwater[5]	McCall Groundwater[6]
Metals				
Arsenic	4.5	2	0.3	22
Chromium	14	1	2	1.4
Copper	25	9	8	0.8
Lead	38	13	10	
Zinc	220	38	104	
PAHs				
Naphthalene	0.08		0.03	0.03
Acenaphthylene	0.06		0.02	0.01
Phenanthrene	0.08		0.14	0.14
Fluoranthene	0.07		0.05	0.05
Pyrene	0.10		0.09	0.08
Benzo(a)pyrene	0.05		0.02	0.02
Total PAHs	0.94		0.68	0.68
Average Flow (MGY)	13,261	7,800,000	27	19

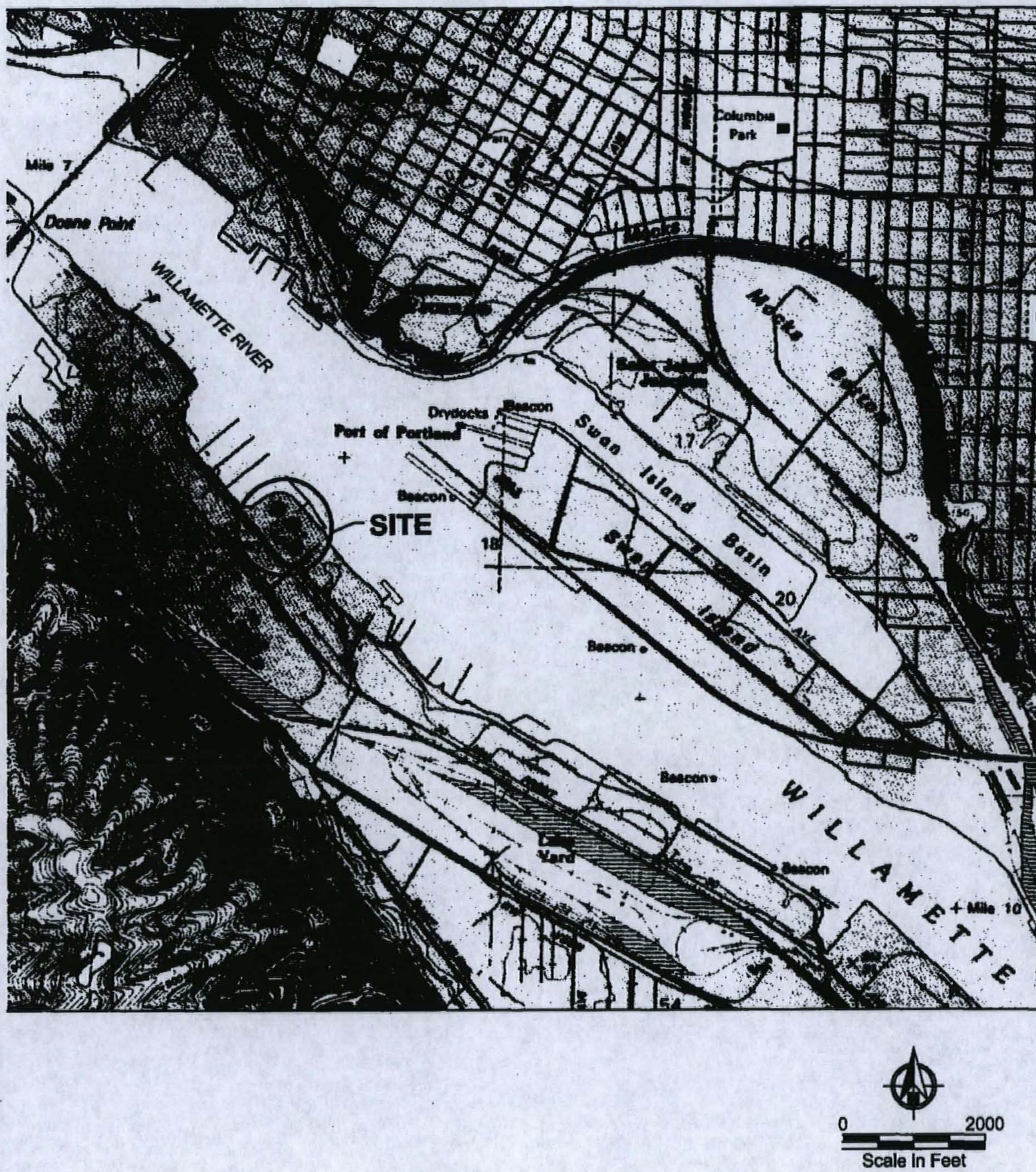
Data Sources:

(1) City of Portland, 2004a, Programmatic Source Control RI Work Plan
(2) Average annual discharge at Willamette River Portland USGS #14211720
(3) City of Portland, 2004b, BES database transmittal on 1-30-04
(4) 90th percentile value, Lower Columbia Basin, per Fuhrer et al, 1996; DEQ, 2002
(5) Average McCall RI stormwater concentration, Table 14
(6) Average McCall dissolved metal groundwater concentration in shoreline wells, Table 13

NA = Not available

MGY= million gallons/year

FIGURES



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

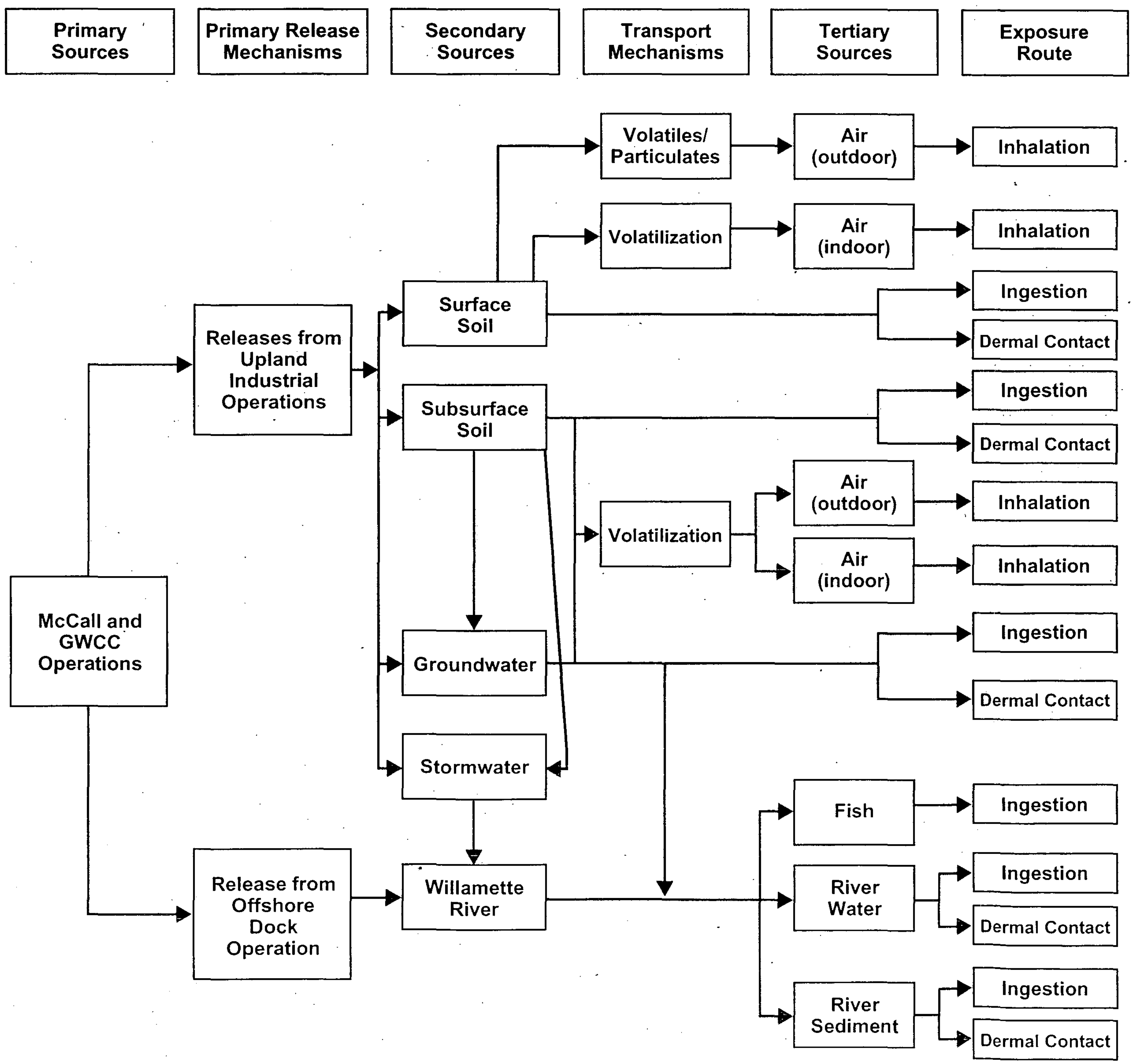
Figure 1
Vicinity Map
McCall Oil and Chemical

* Land use based on 1993 assessment records

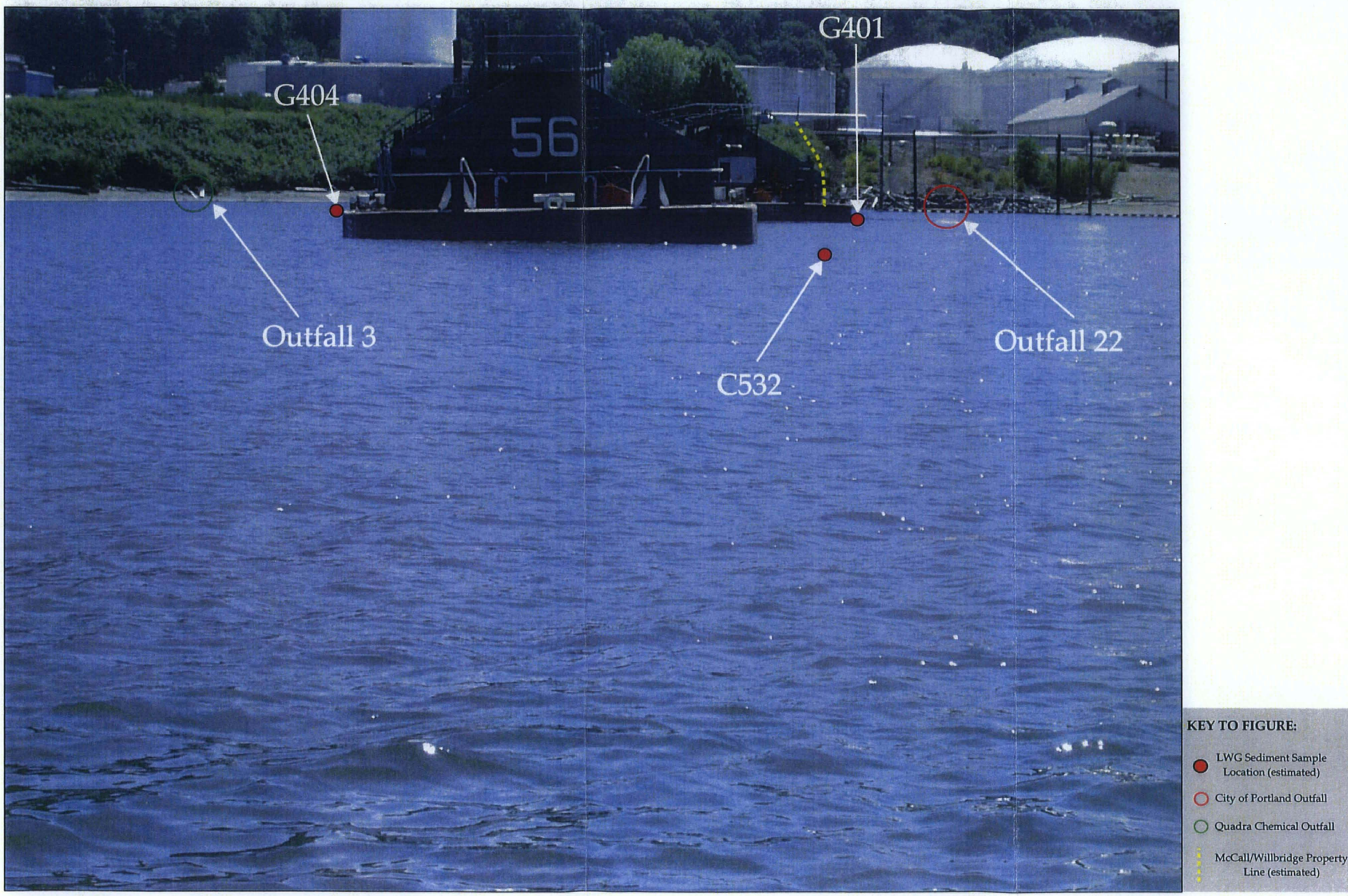
ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Land Use Map
McCall Oil and Chemical

Figure 3
McCall Oil & Chemical Conceptual Site Model



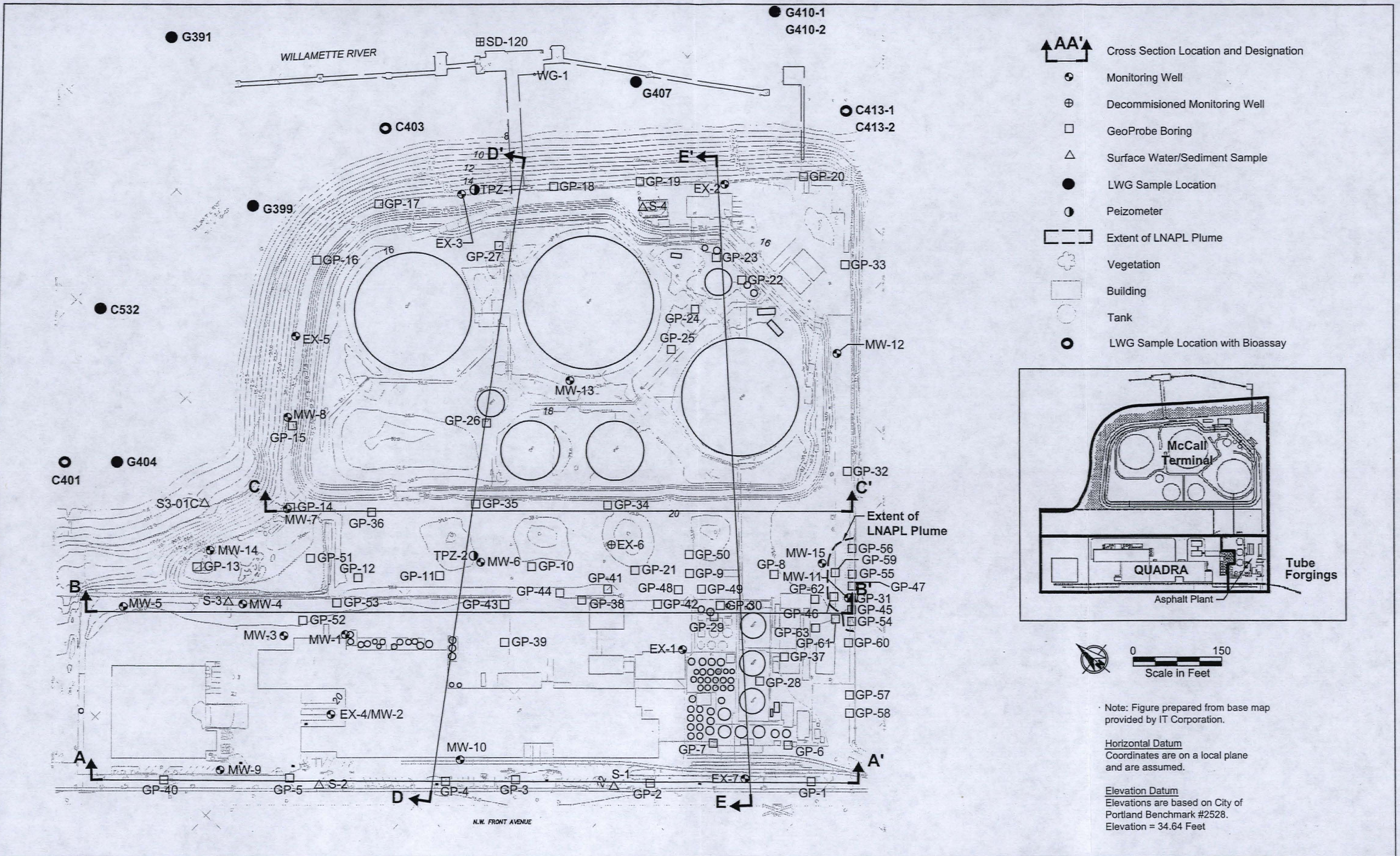
Exposure Route	Potential Receptors – Human: Industrial Onsite Worker	Construction Worker	Trench Worker	Recreation	Ecological: Aquatic & Wildlife
Inhalation	+	+	+	−	−
Inhalation	+	+	+	−	−
Ingestion	+	+	+	−	−
Dermal Contact	+	+	+	−	−
Ingestion	−	+	+	−	−
Dermal Contact	−	+	+	−	−
Inhalation	+	+	+	−	−
Inhalation	+	+	+	−	−
Ingestion	−	−	−	−	−
Dermal Contact	−	−	−	−	−
Ingestion	−	−	−	+	+
Ingestion	−	−	−	−	+
Dermal Contact	−	−	−	−	+
Ingestion	+	−	−	−	+
Dermal Contact	+	−	−	−	+



Jun 23, 2006 9:59am cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-21.dwg OUTFALL 3 AND 22

ANCHOR ENVIRONMENTAL, L.L.C.

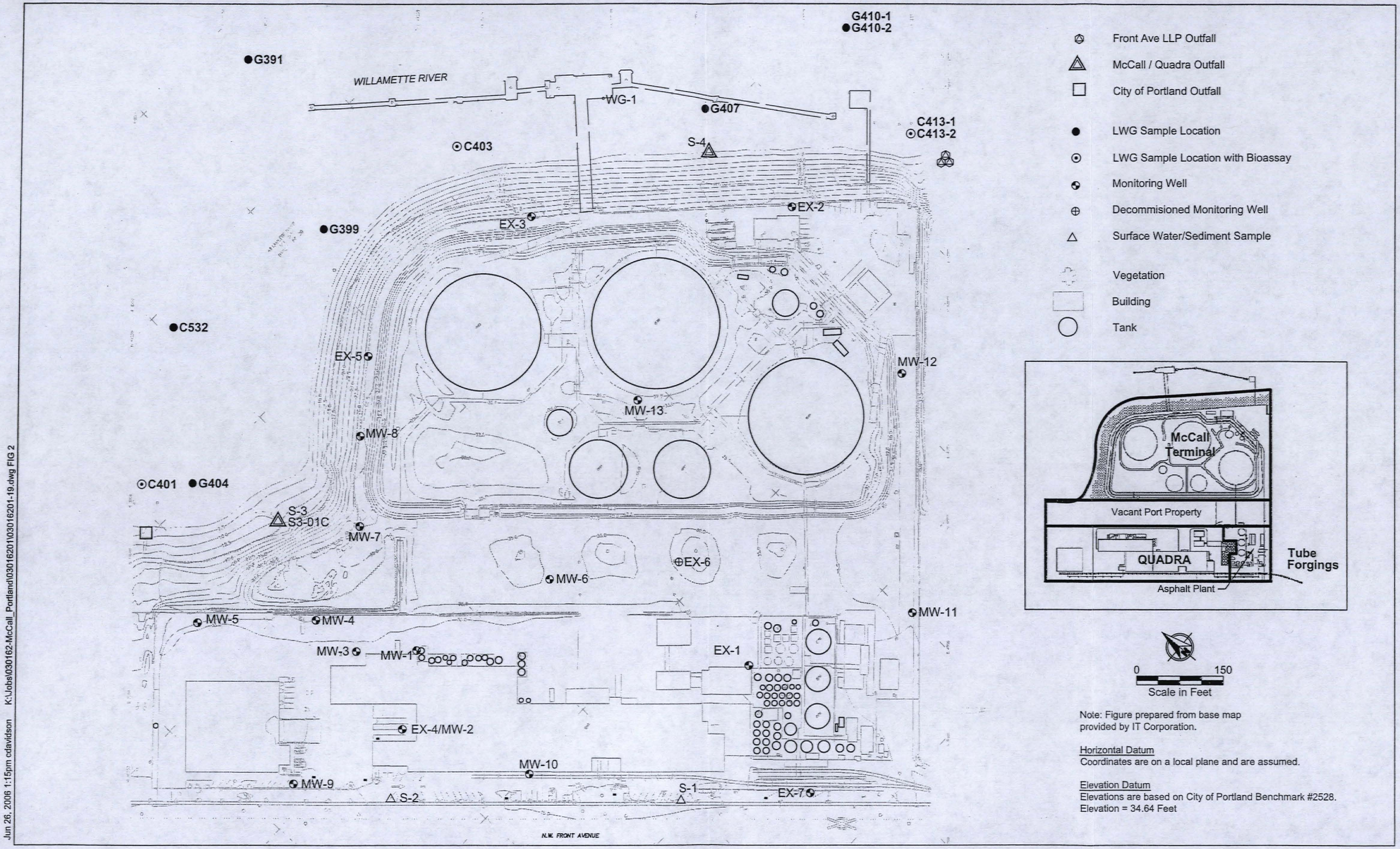
Figure 4
Quadra Outfall 3 and COP Outfall 22
McCall Oil and Chemical



Jul 01, 2004 8:14am cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-14.dwg FIG 2

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 5
Boring and Well Location Map
McCall Oil and Chemical



Note: Figure prepared from base map provided by IT Corporation.

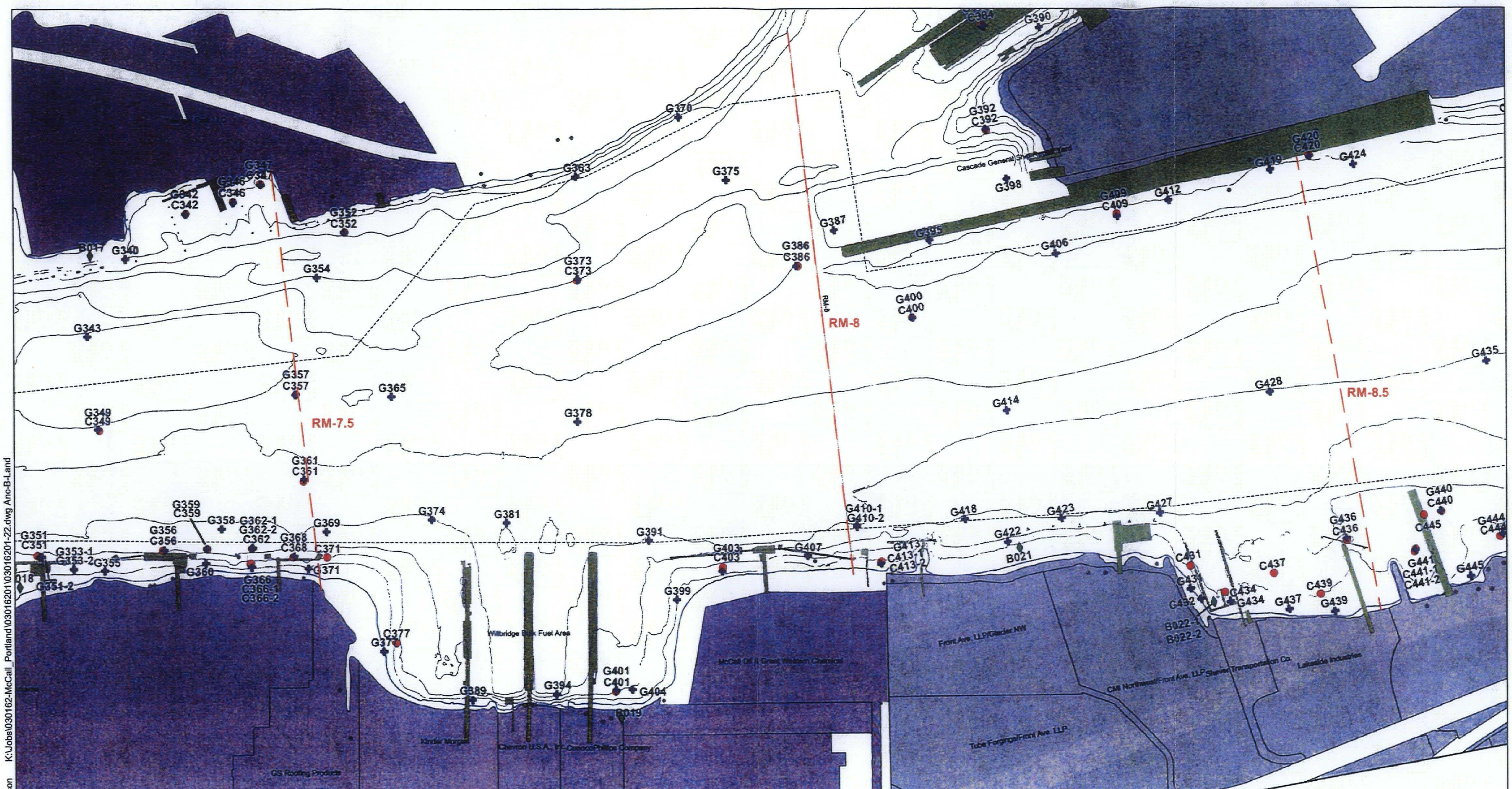
Horizontal Datum
Coordinates are on a local plane and are assumed.

Elevation Datum
Elevations are based on City of Portland Benchmark #2528.
Elevation = 34.64 Feet

Jun 26, 2006 1:15pm cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-19.dwg FIG 2

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6
Sediment Sampling and Monitoring Well Location Map
McCall Oil and Chemical



Legend
- Subsurface Sample Location
- Surface Sample Location
- Beach Sample Location
- Outfall Location

Not to Scale

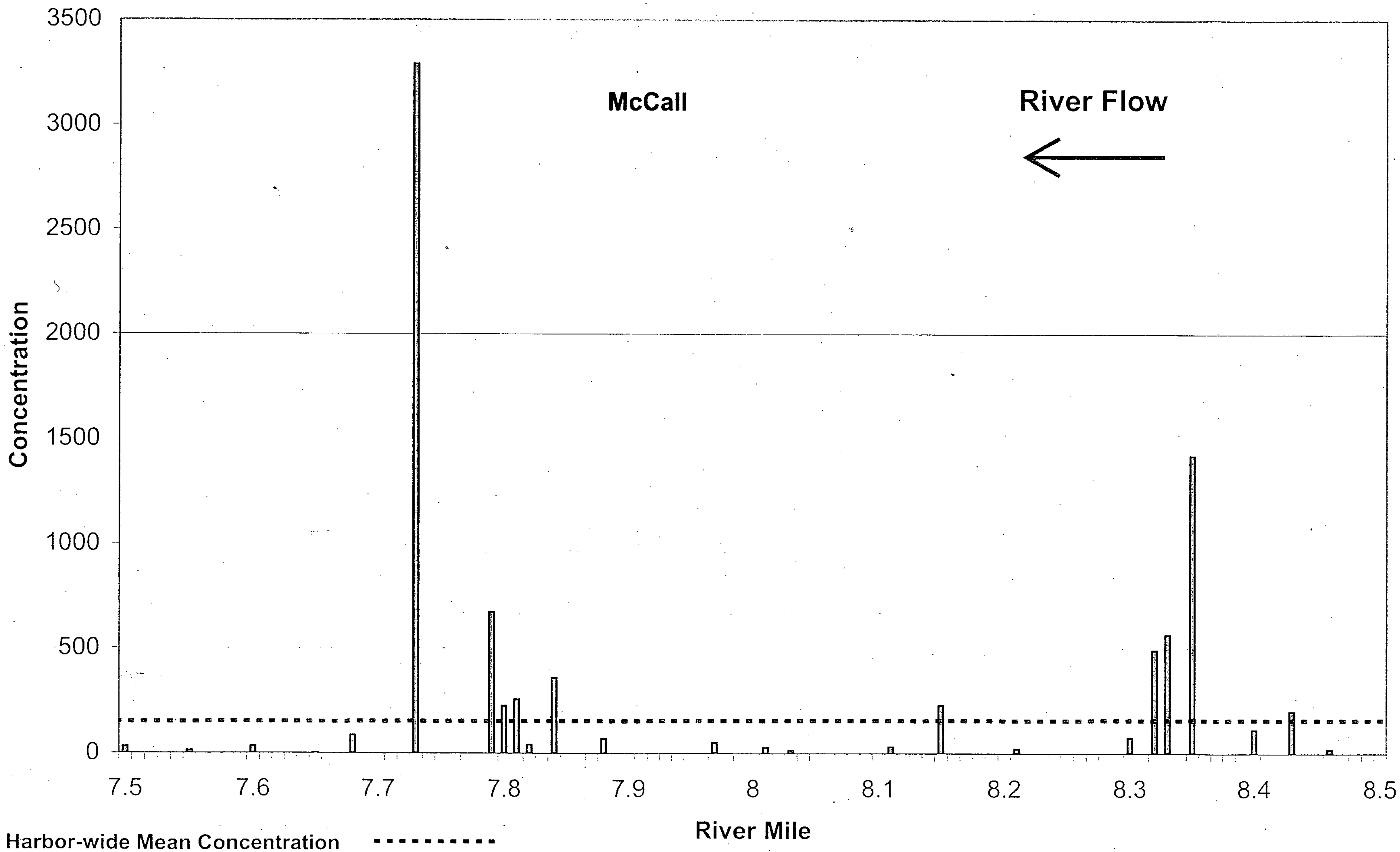
Source: Portland Harbor RI/FS Round 2A Sediment Site Characterization Summary Report Map Folio Draft, July 15, 2005.

Jun 26, 2006 3:41pm cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-22.dwg Anc-B-Land

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 7
LWG Round 2A Sample Locations
Willamette River Impact Assessment
McCall Oil and Chemical

Total LPAHs (ug/kg)



Harbor-wide Mean Concentration

(25800 ug/kg--not shown)

Harbor-wide Median Concentration

Figure 8.1

LWG Sediment Chemistry Data
McCall Oil and Chemical

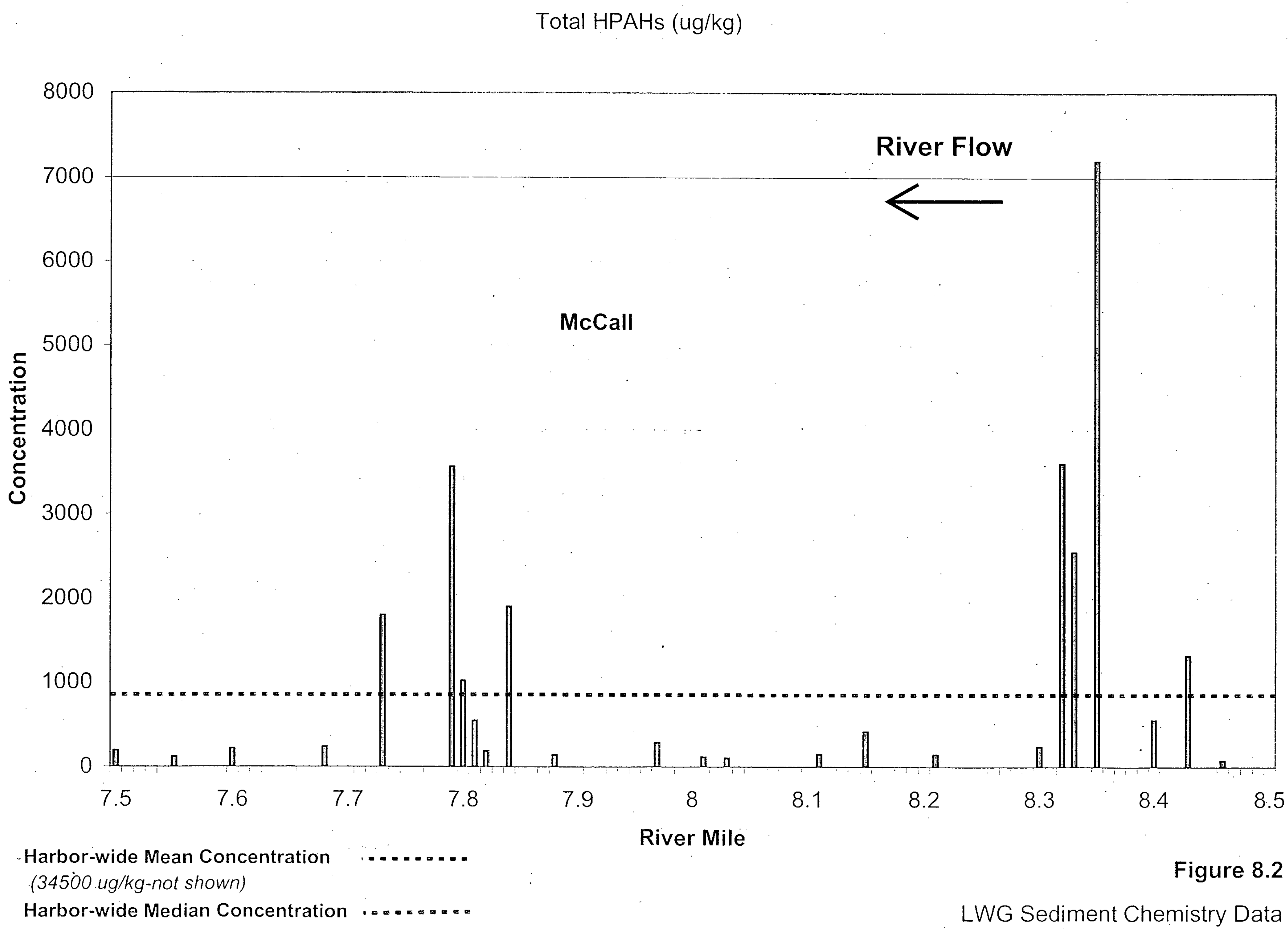


Figure 8.2

LWG Sediment Chemistry Data
McCall Oil and Chemical

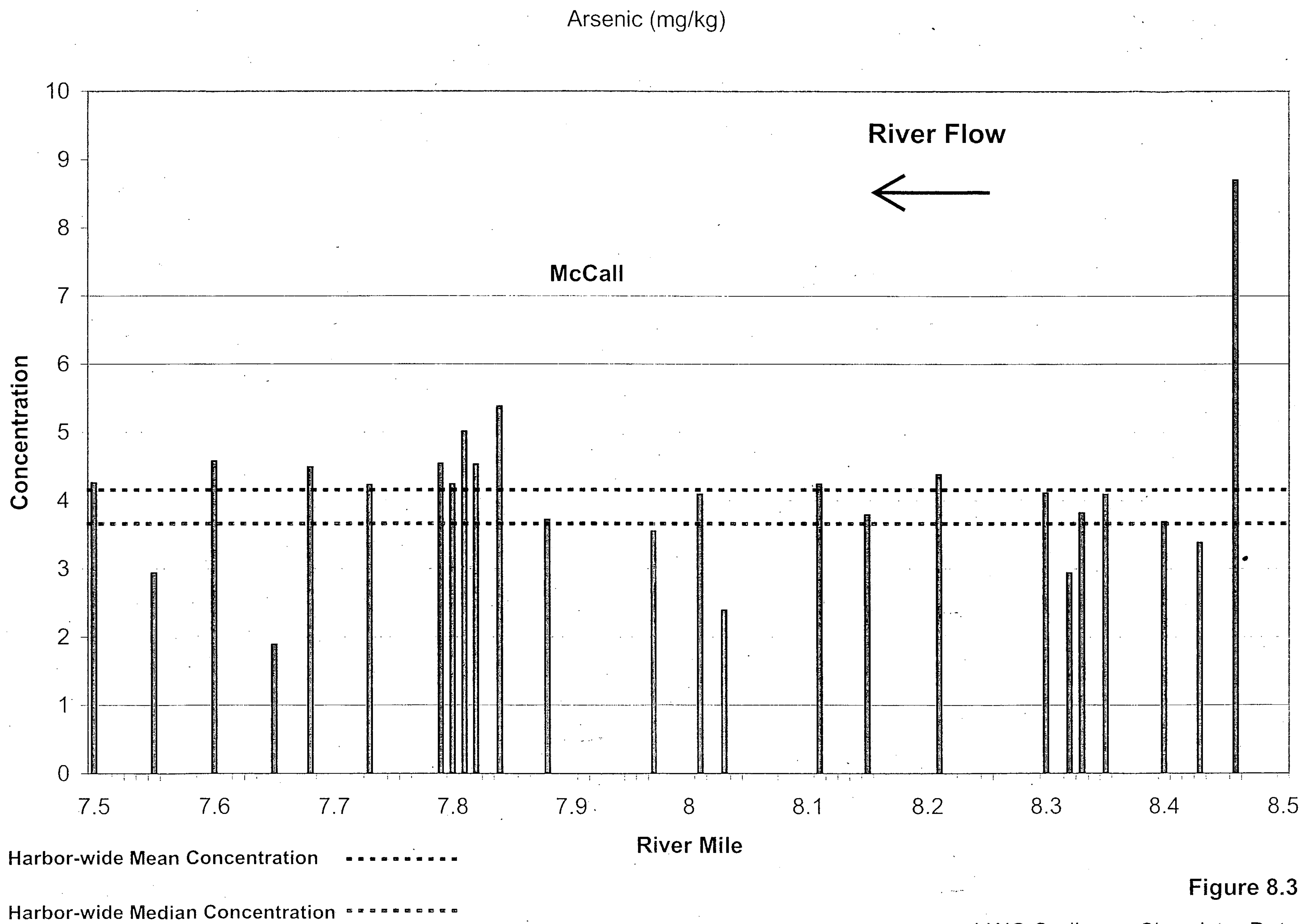


Figure 8.3

LWG Sediment Chemistry Data
McCall Oil and Chemical

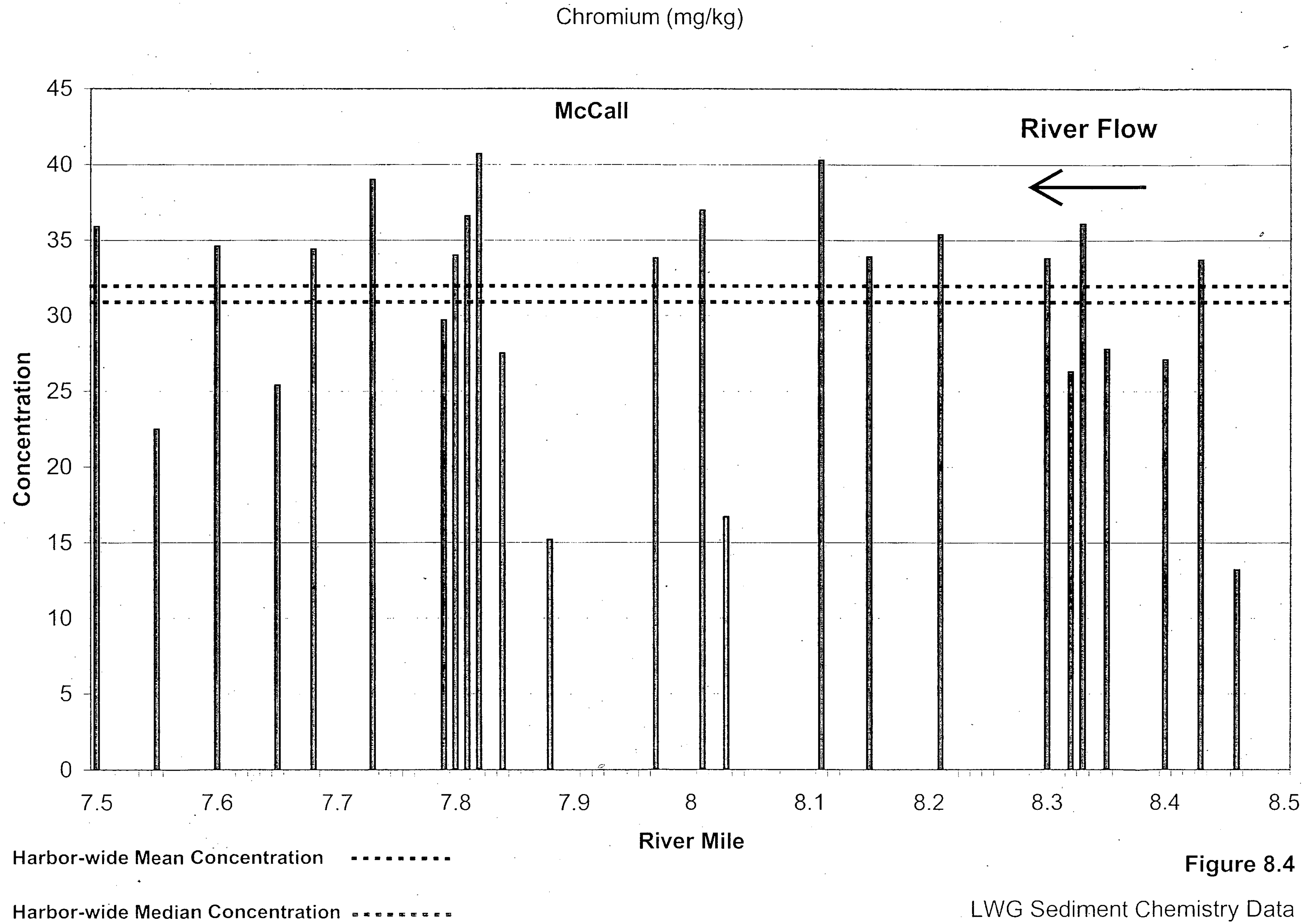


Figure 8.4

LWG Sediment Chemistry Data
McCall Oil and Chemical

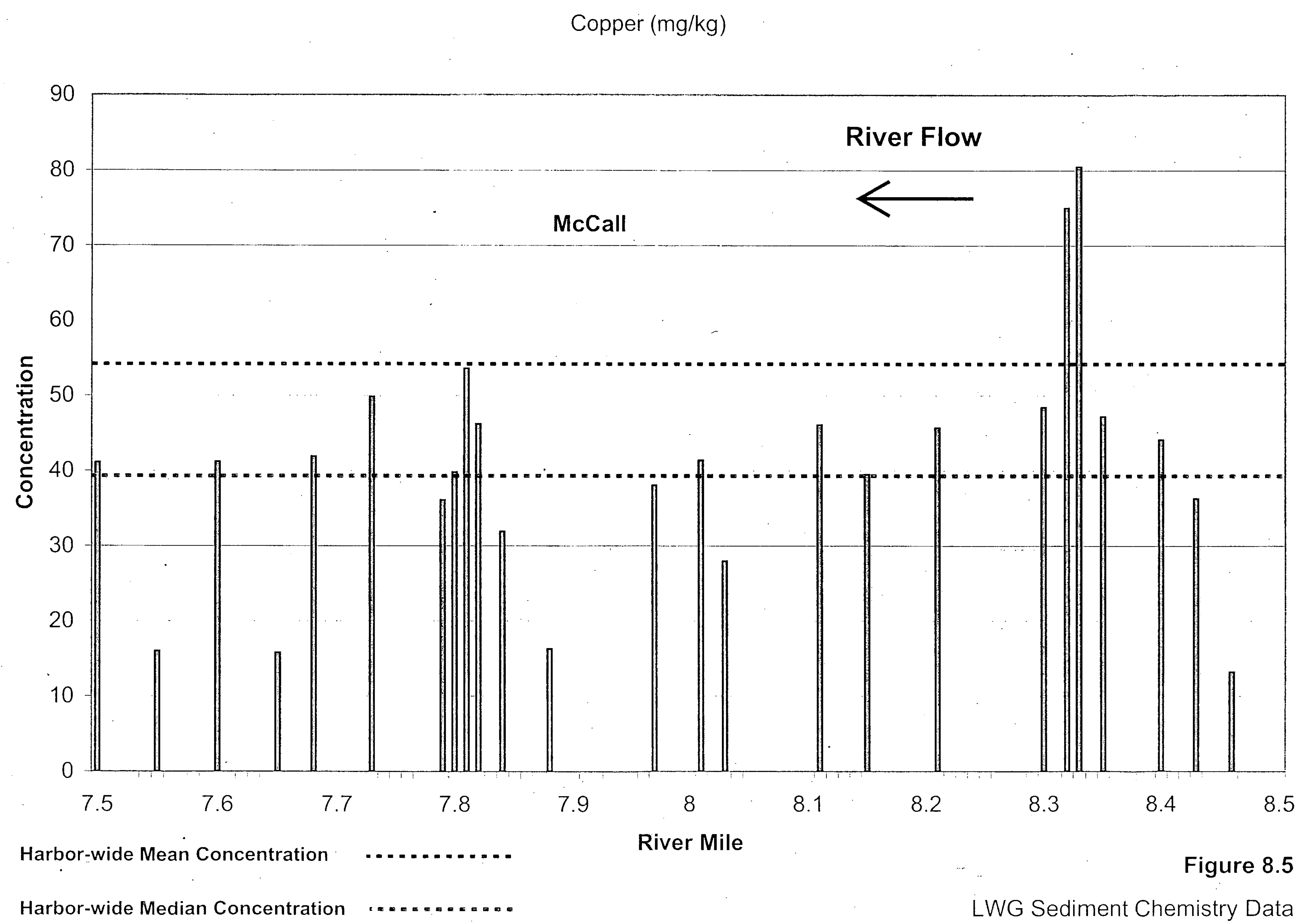


Figure 8.5

LWG Sediment Chemistry Data
McCall Oil and Chemical

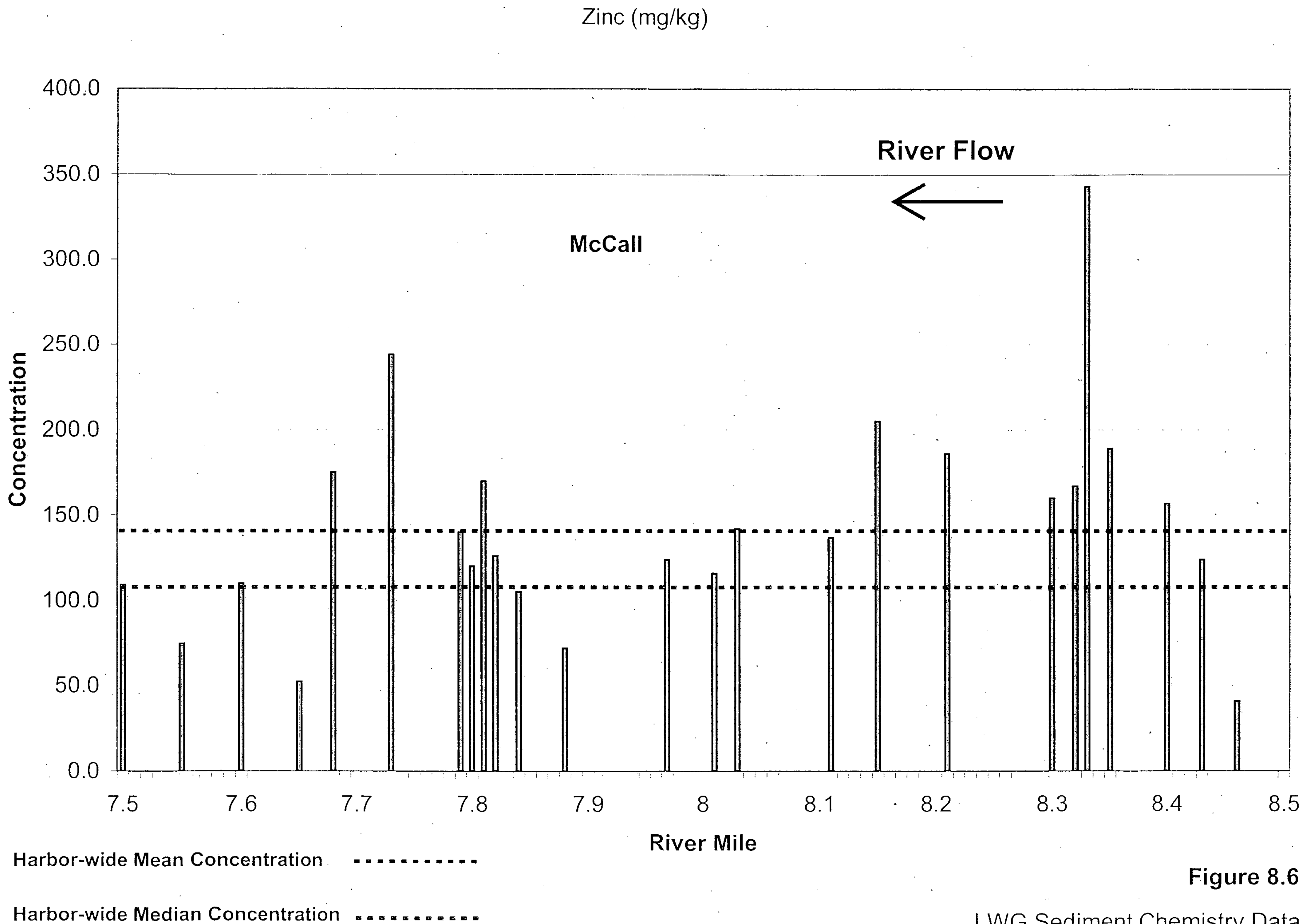


Figure 8.6

LWG Sediment Chemistry Data
McCall Oil and Chemical

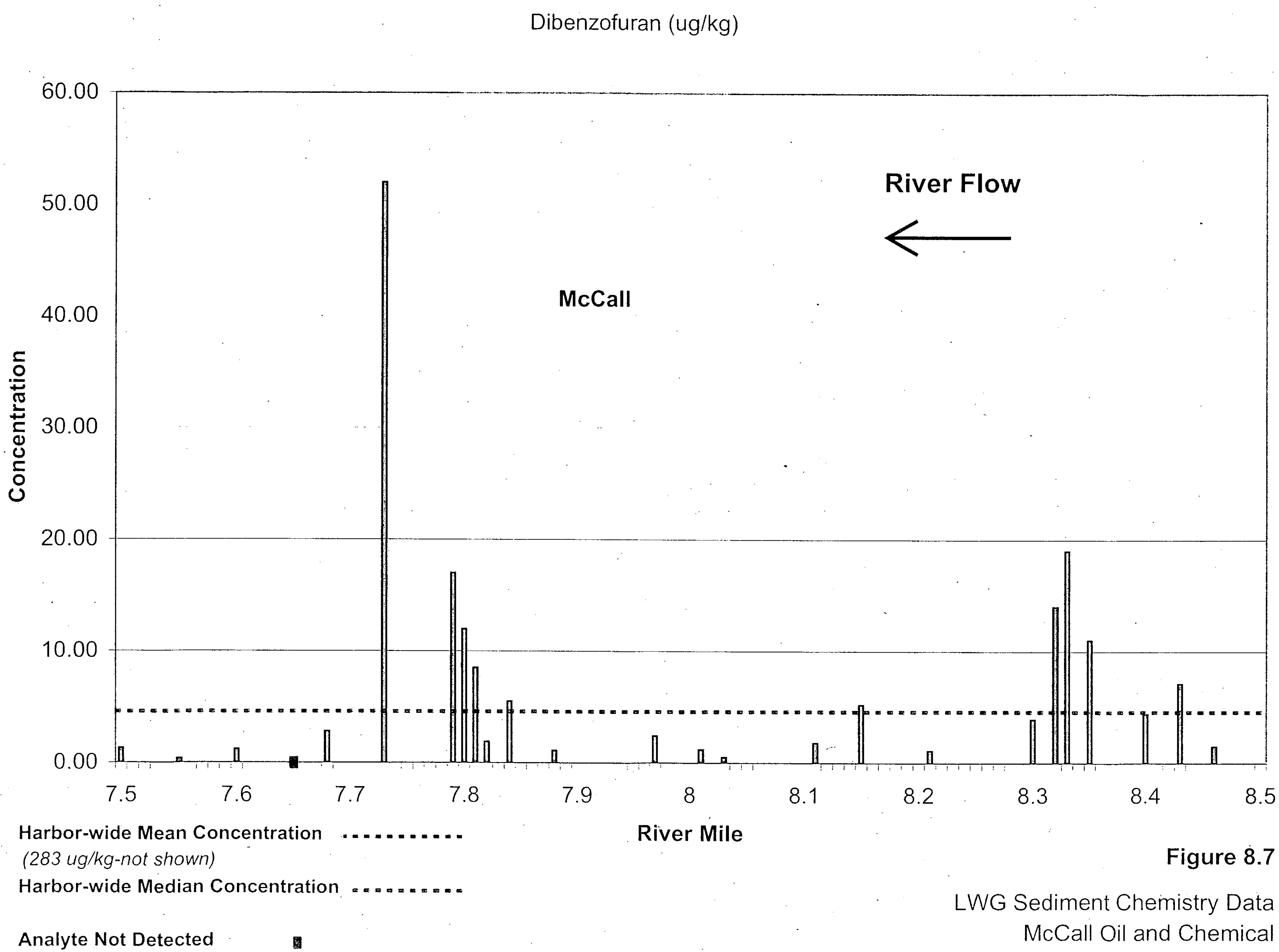


Figure 8.7

LWG Sediment Chemistry Data
McCall Oil and Chemical

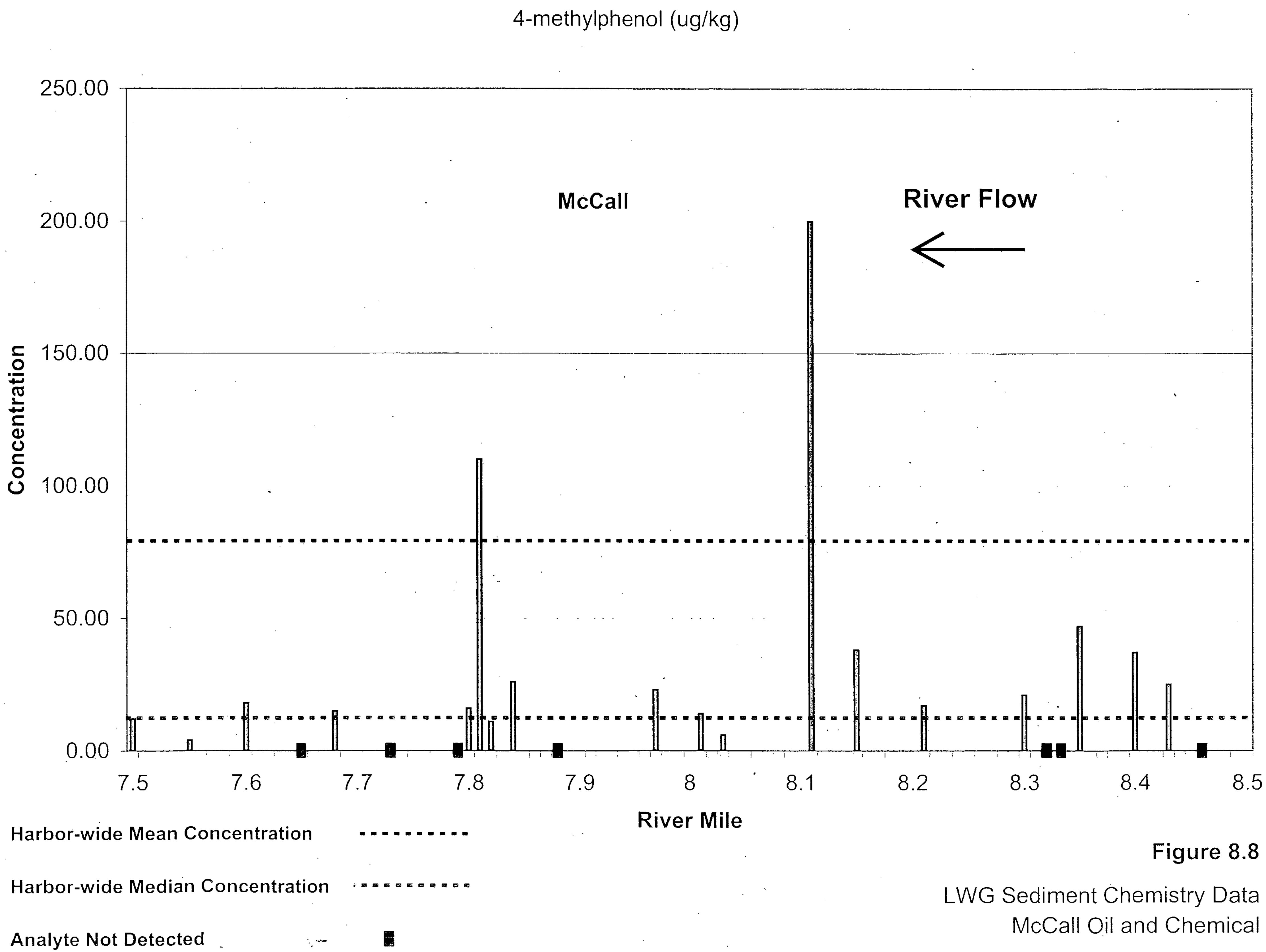


Figure 8.8

LWG Sediment Chemistry Data
McCall Oil and Chemical

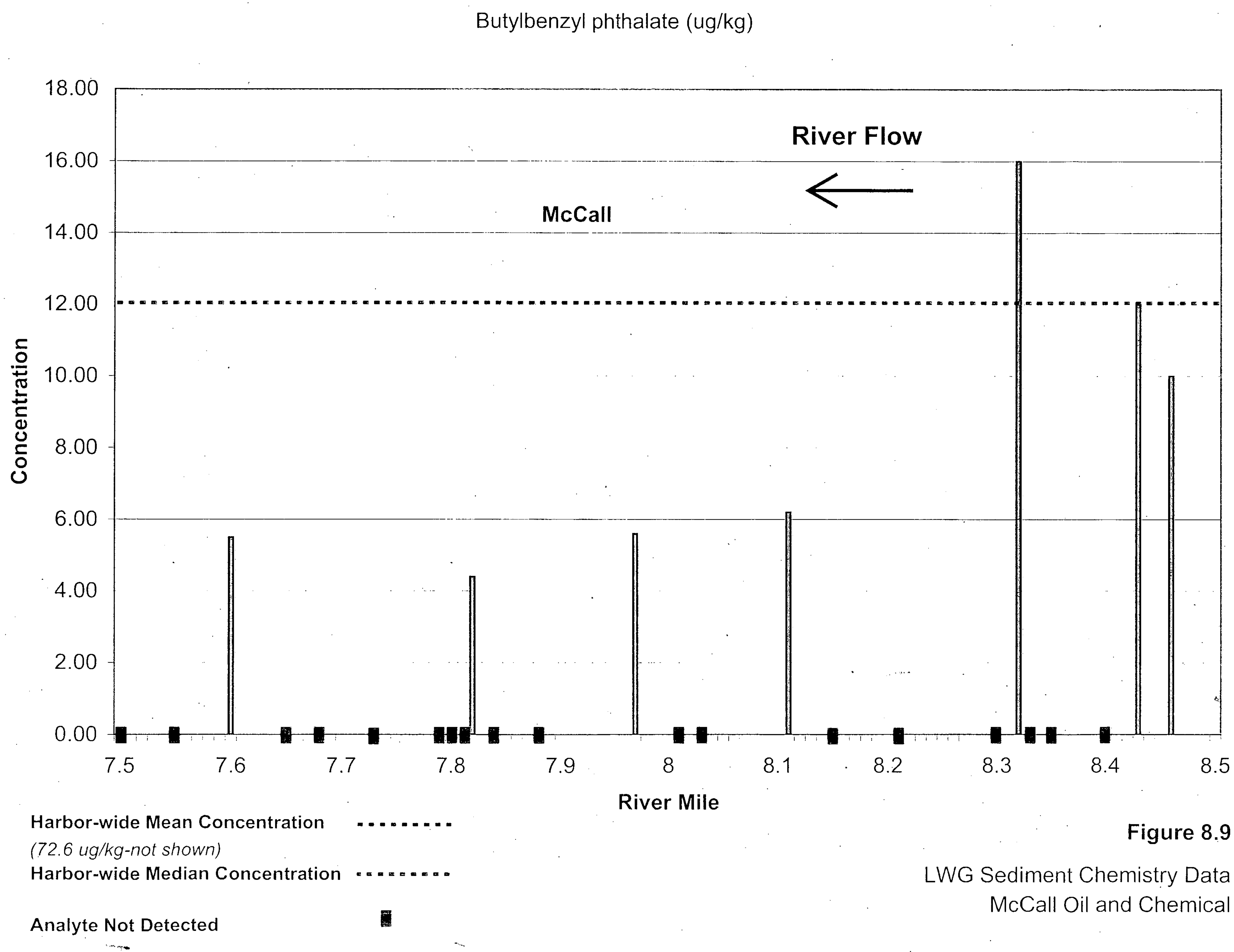


Figure 8.9

LWG Sediment Chemistry Data
McCall Oil and Chemical

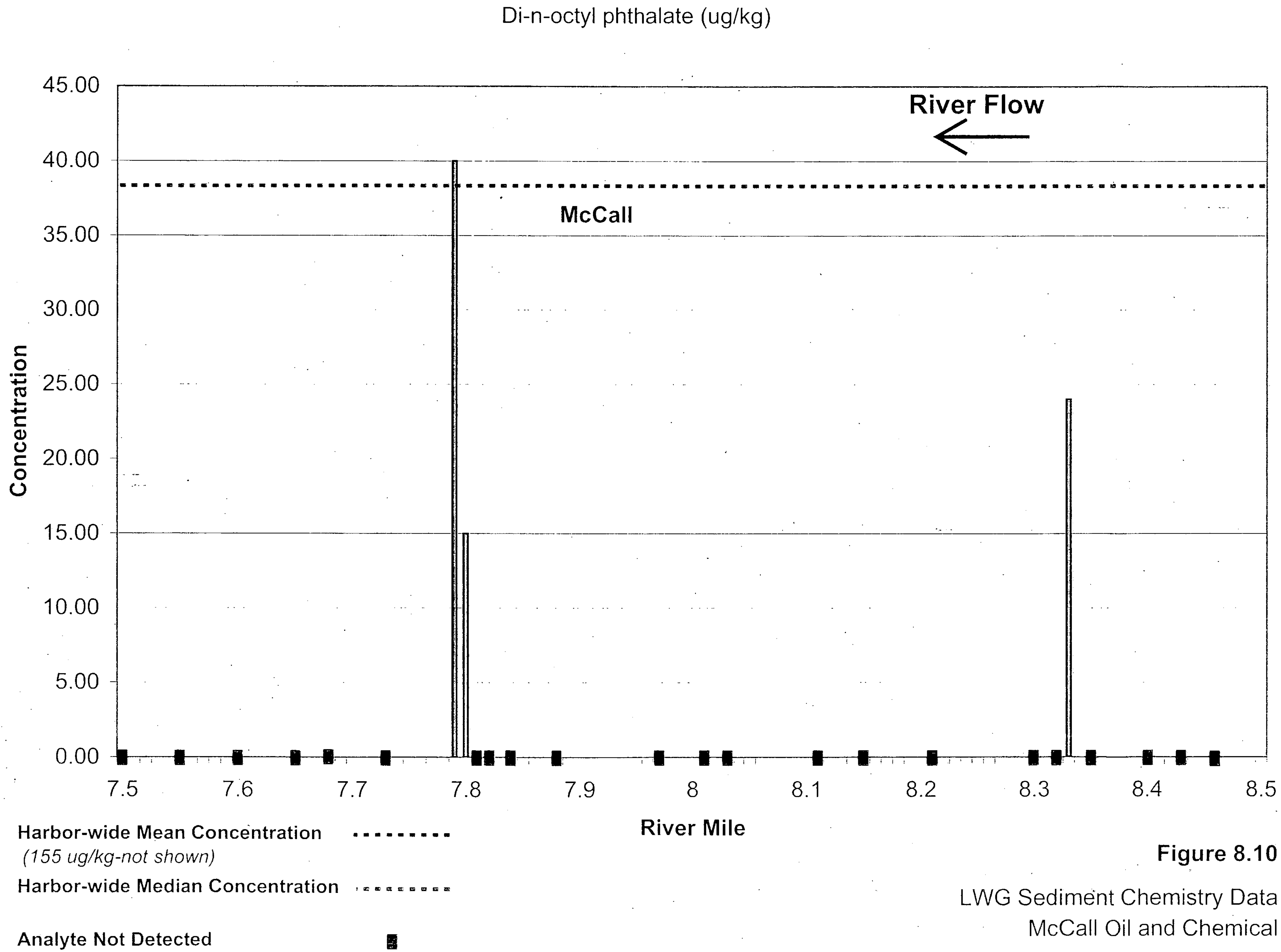
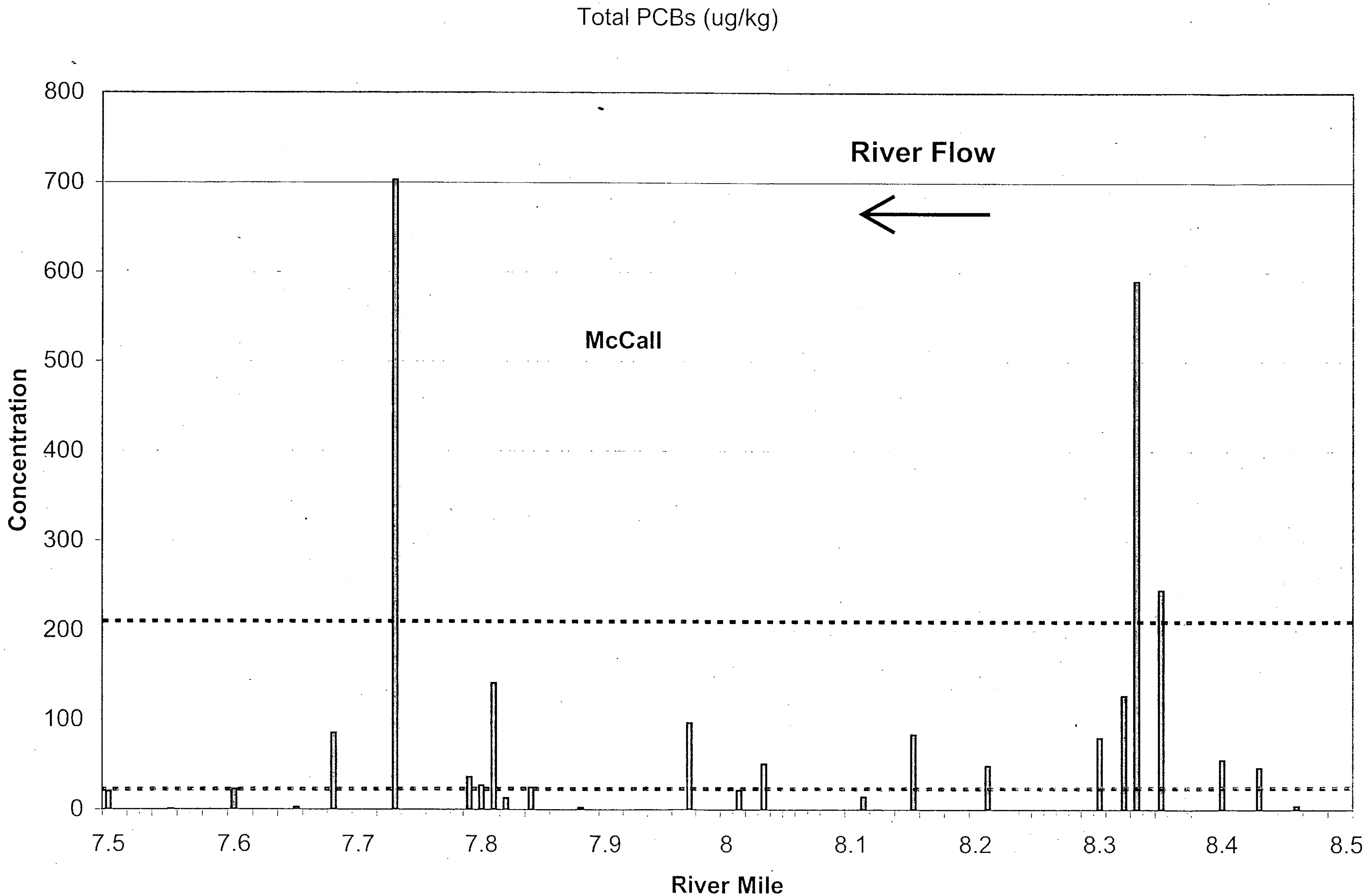


Figure 8.10

LWG Sediment Chemistry Data
McCall Oil and Chemical

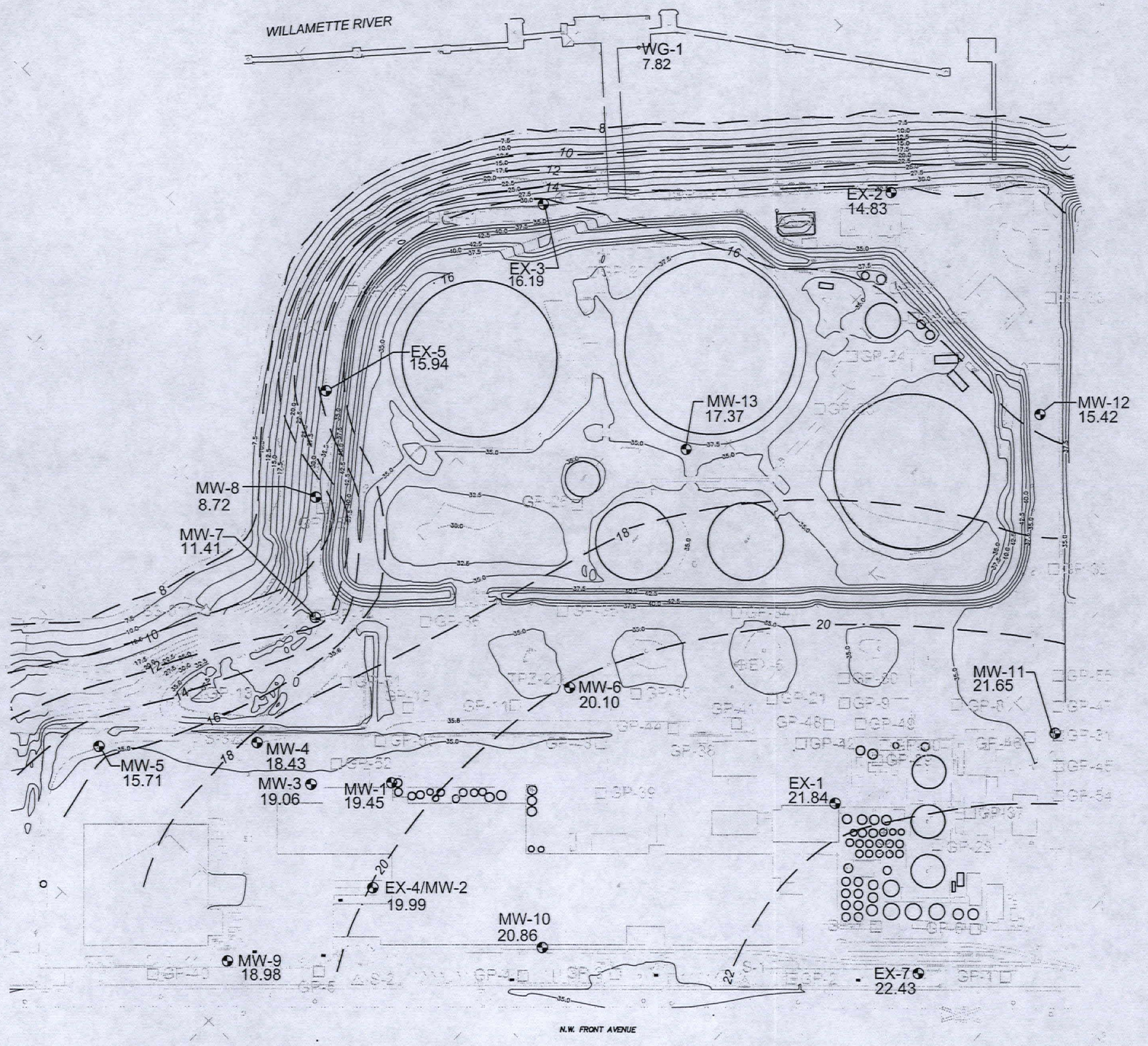


Harbor-wide Mean Concentration - - - - - - - -

Harbor-wide Median Concentration - - - - - - - -

Figure 8.11

LWG Sediment Chemistry Data
McCall Oil and Chemical



8 Groundwater Elevation Contour in Feet

15.42 Groundwater Elevation in Feet

Monitoring Well

Decommisioned Monitoring Well

GeoProbe Boring

Surface Water/Sediment Sample

Peizometer

Vegetation

Building

Tank

Horizontal Datum
Coordinates are on a local plane and are assumed.

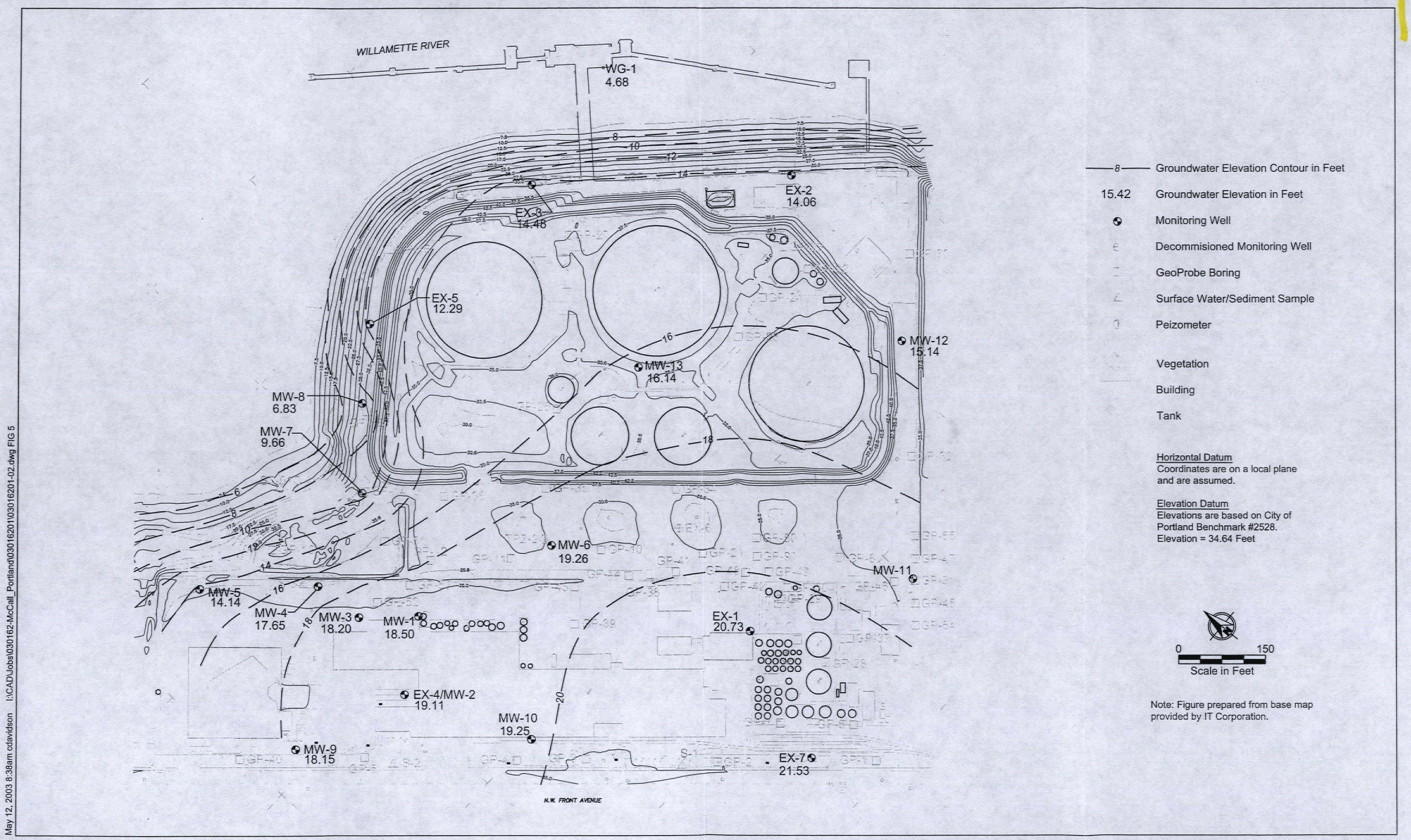
Elevation Datum
Elevations are based on City of Portland Benchmark #2528.
Elevation = 34.64 Feet

0 150
Scale in Feet

Note: Figure prepared from base map provided by IT Corporation.

ANCHOR ENVIRONMENTAL, L.L.C.

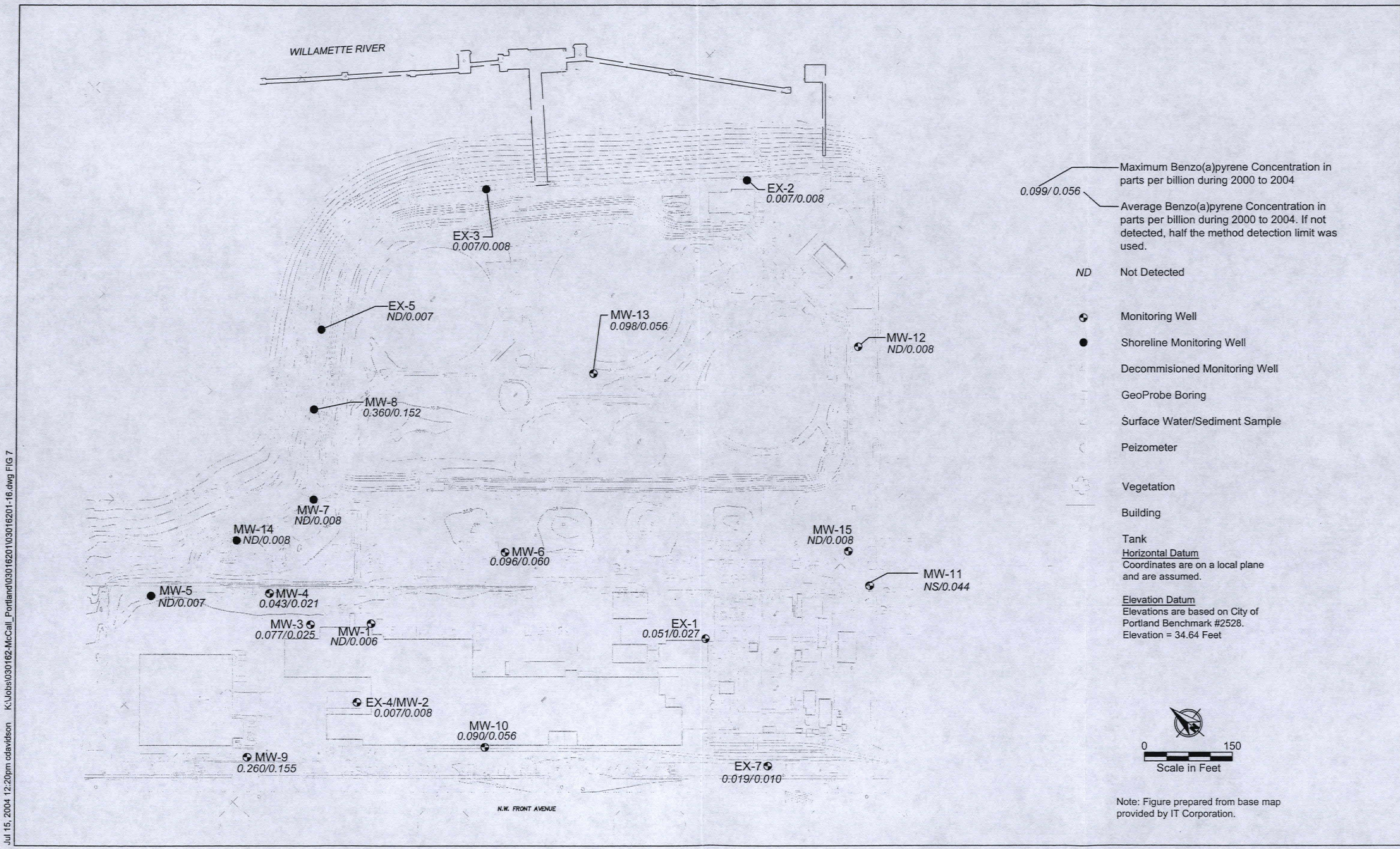
Figure 9
Groundwater Potentiometric Surface Contour Map
March 2002
McCall Oil and Chemical



May 12, 2003 8:38am cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-02.dwg FIG 5

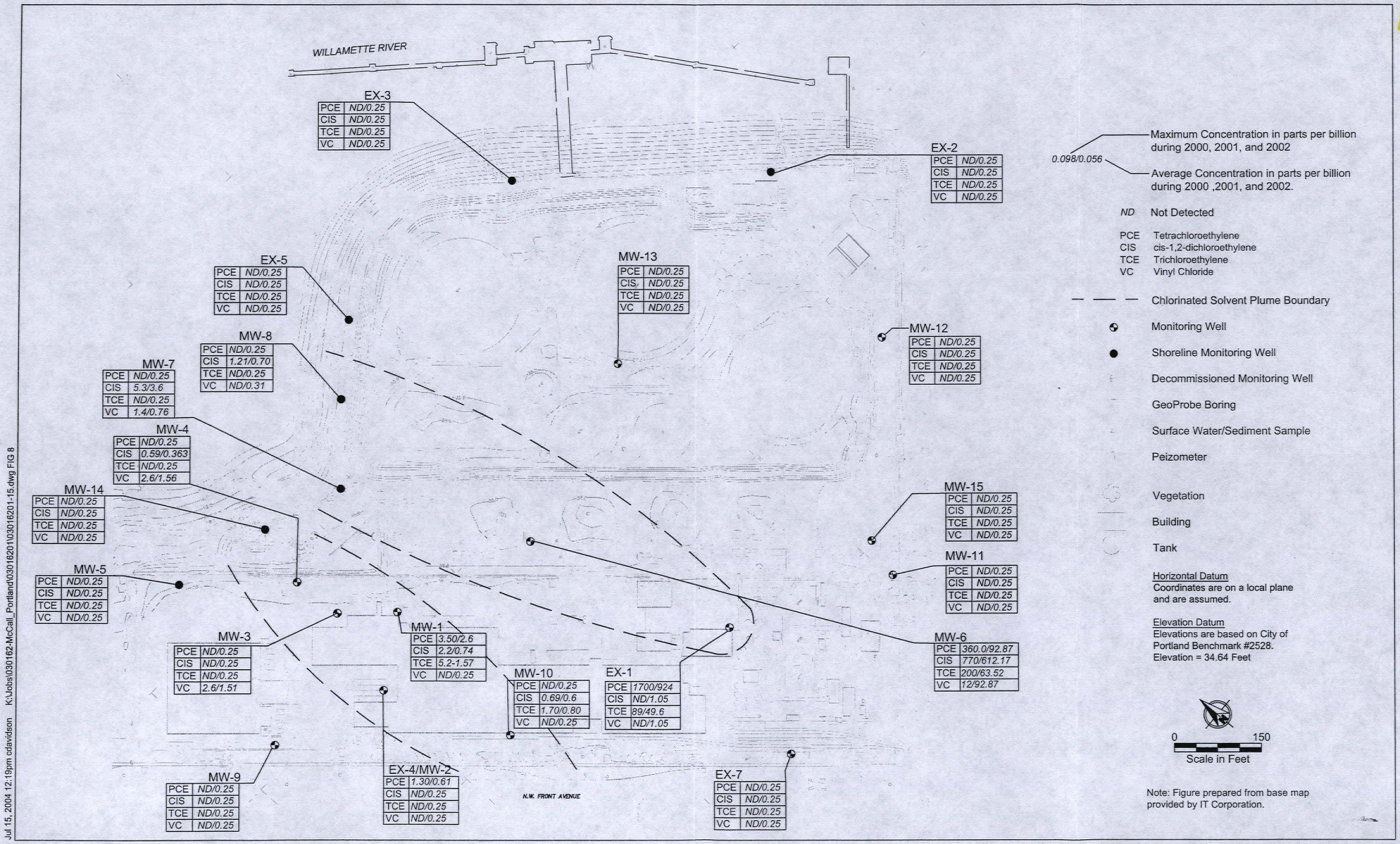
ANCHOR ENVIRONMENTAL, L.L.C.

Figure 10
Groundwater Potentiometric Surface Contour Map
October 2002
McCall Oil and Chemical



ANCHOR ENVIRONMENTAL, L.L.C.

Figure 11
Benzo(a)pyrene in Groundwater
McCall Oil and Chemical

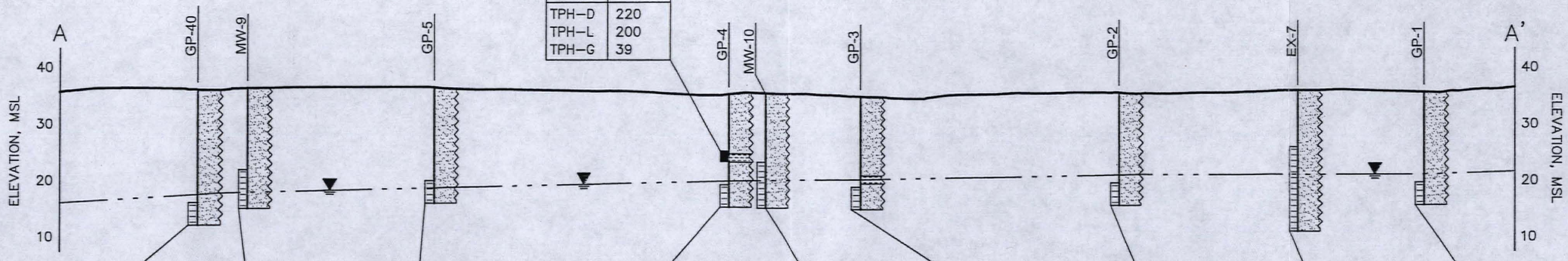


Jul 15, 2004 12:19pm cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-15.dwg FIG 8

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 12
Chlorinated Solvents in Groundwater
McCall Oil and Chemical

GP-4	
VOCs	ND
HPAH	730
LPAH	150
SVOCs	
4M	ND
DB	ND
BBP	ND
DNP	ND
TPH-D	220
TPH-L	200
TPH-G	39



	GP-40	MW-9 (1/22/02)	GP-5	GP-4	MW-10 (1/22/02)	GP-3	GP-2	EX-7 (12/20/00)	GP-1
VOCs	ND	ND	ND	ND	0.57	ND	ND	ND	ND
HPAH	2.18	1.72	0.19	61.5	0.55	0.33	3.52	0.016	1.05
LPAH	0.67	0.71	0.378	646	0.30	26.69	0.65	ND	0.46
SVOCs									
4M	0.04	ND	0.04	ND	ND	0.03	0.02	ND	0.07
DB	0.01	ND	ND	19	ND	1.0	0.01	ND	0.01
BBP	1.00	ND	0.01	ND	0.045	0.02	0.30	ND	0.08
DNP	ND	MD	ND	ND	ND	ND	ND	ND	ND
TPH-D	640	480	430	7100	250	280	ND	ND	ND
TPH-L	ND	310	300	4400	510	ND	ND	ND	ND
TPH-G	ND	140	620	2500	ND	170	130	ND	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS – LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS – GASOLINE

ND – NOT DETECTED
NT – NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

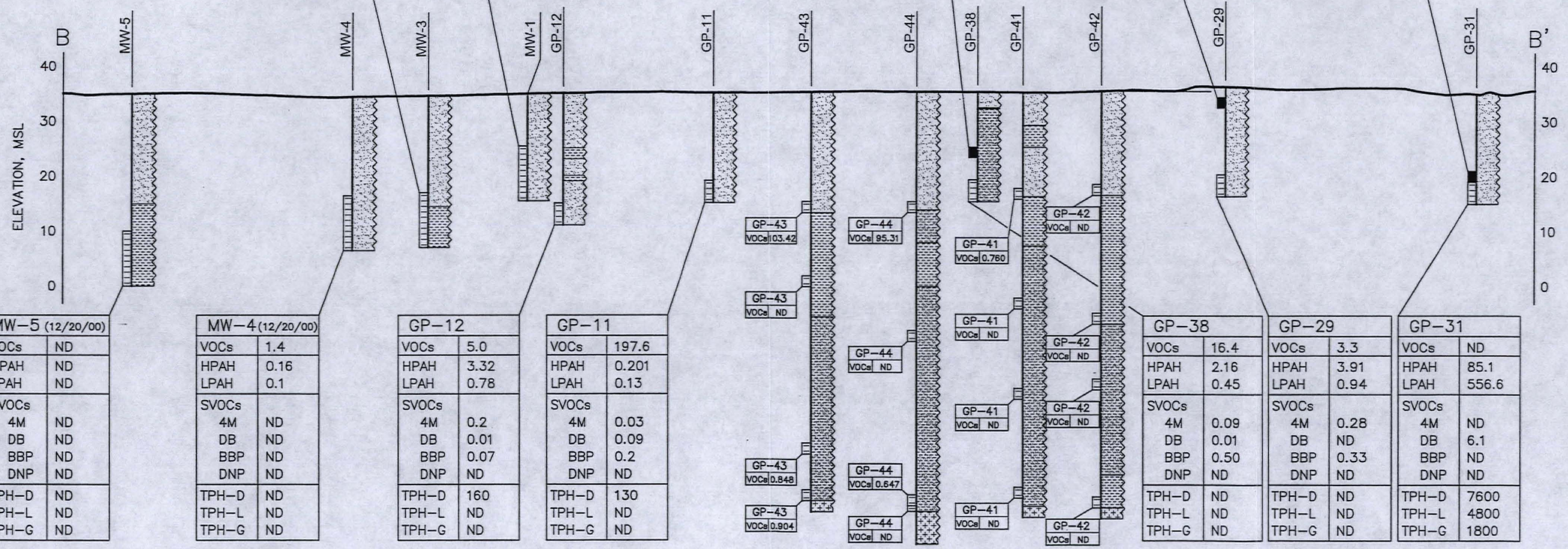
Horizontal Scale in Feet: 0, 100, 200
Vertical Scale in Feet: 0, 20, 40
Vertical Exaggeration x 5

Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 4:40pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-03.dwg FIG 6A

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6A
Cross Section A-A'
McCall Oil and Chemical



	MW-3 (12/20/00)	MW-1 (12/20/00)	GP-38	GP-29	GP-31
VOCs	1.2	4.59	ND	ND	ND
HPAH	0.113	ND	1934	13630	42700
LPAH	0.32	ND	2113	21370	255100
SVOCs					
4M	ND	ND	1000	ND	ND
DB	ND	ND	45	ND	3000
BBP	ND	ND	ND	ND	ND
DNP	ND	ND	ND	ND	ND
TPH-D	ND	ND	930	18000	35000
TPH-L	ND	ND	440	36000	38000
TPH-G	720	1200	47	710	6300

	MW-5 (12/20/00)	MW-4 (12/20/00)	GP-12	GP-11	GP-38	GP-29	GP-31
VOCs	ND	1.4	5.0	197.6	16.4	3.3	ND
HPAH	ND	0.16	3.32	0.201	2.16	3.91	85.1
LPAH	ND	0.1	0.78	0.13	0.45	0.94	556.6
SVOCs							
4M	ND	ND	0.2	0.03	0.09	0.28	ND
DB	ND	ND	0.01	0.09	0.01	ND	6.1
BBP	ND	ND	0.07	0.2	0.50	0.33	ND
DNP	ND	ND	ND	ND	ND	ND	ND
TPH-D	ND	ND	160	130	ND	ND	7600
TPH-L	ND	ND	ND	ND	ND	ND	4800
TPH-G	ND	ND	ND	ND	ND	ND	1800

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS - DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS - LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS - GASOLINE

ND - NOT DETECTED
NT - NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- BEDROCK
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

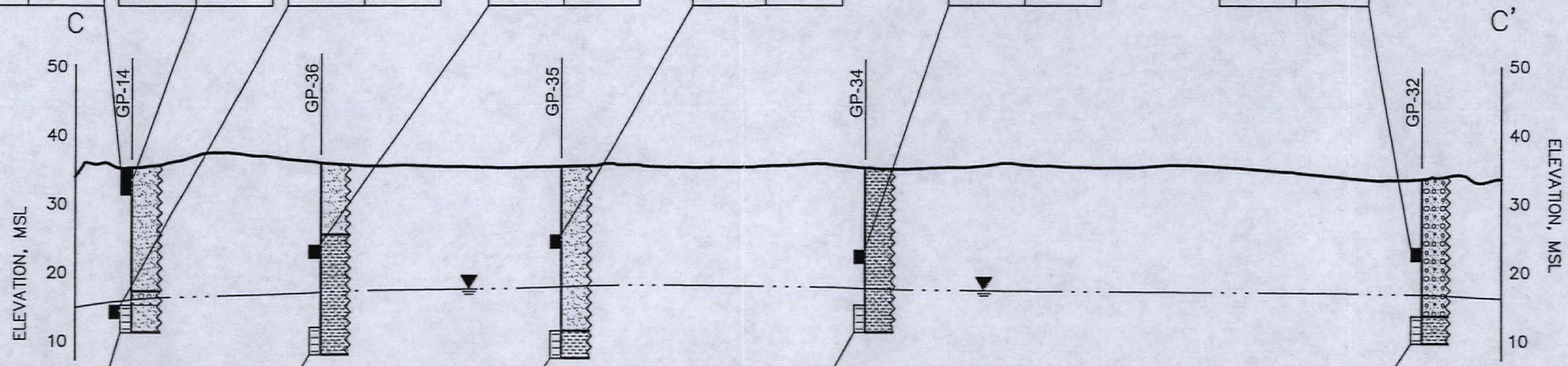
Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 1:02pm cdavidson I:\CADJobs\030162-McCall_Portland\030162010301620104.dwg FIG 6B

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6B
Cross Section B-B'
McCall Oil and Chemical

	GP-14	GP-14	GP-14	GP-36	GP-35	GP-34	GP-32
VOCs	NT	NT	NT	ND	ND	ND	ND
HPAH	55	42	704	369	165	425	29
LPAH	2.2	2.3	106.9	181	38	206	9
SVOCs							
4M	ND	ND	ND	80	ND	ND	ND
DB	0.6	0.7	2.0	6	0.8	8	ND
BBP	ND	ND	ND	ND	0.7	ND	ND
DNP	ND	ND	ND	ND	ND	ND	ND
TPH-D	14	ND	30	240	25	48	ND
TPH-L	55	ND	110	430	55	160	29
TPH-G	ND	ND	ND	18	ND	ND	ND



	GP-14	GP-36	GP-35	GP-34	GP-32
VOCs	15.75	26.6	109.5	ND	ND
HPAH	2.95	2.81	5.39	0.84	7.2
LPAH	0.63	1.00	1.37	0.53	18.1
SVOCs					
4M	0.2	0.67	1.5	0.75	1.4
DB	0.02	0.03	0.03	0.05	0.2
BBP	ND	0.83	0.43	0.13	0.65
DNP	ND	ND	ND	ND	ND
TPH-D	ND	210	200	2100	700
TPH-L	ND	ND	270	580	1100
TPH-G	ND	ND	ND	130	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS – LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS – GASOLINE

ND – NOT DETECTED
NT – NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

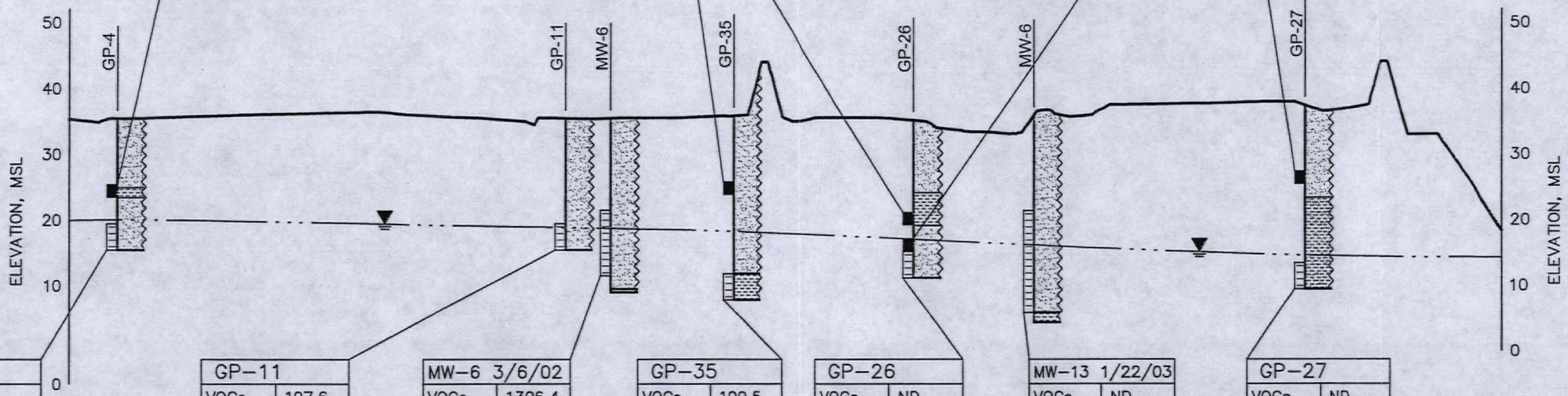
Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 1:04pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-05.dwg FIG 6C

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6C
Cross Section C-C'
McCall Oil and Chemical

	GP-4	GP-35	GP-26	GP-26	GP-27
VOCs	ND	ND	ND	ND	ND
HPAH	730	165	501	68	49
LPAH	150	38	226	36	21
SVOCs					
4M	ND	ND	180	ND	ND
DB	ND	0.8	9	2	0.8
BBP	ND	0.7	ND	ND	2
DNP	ND	ND	ND	ND	ND
TPH-D	220	25	68	ND	ND
TPH-L	200	55	170	ND	48
TPH-G	39	ND	ND	ND	ND



	GP-4	GP-11	MW-6 3/6/02	GP-35	GP-26	MW-13 1/22/03	GP-27
VOCs	ND	197.6	1306.4	109.5	ND	ND	ND
HPAH	61.5	0.201	1.00	5.39	0.710	0.37	0.94
LPAH	646	0.13	0.38	1.37	0.52	0.54	1.53
SVOCs							
4M	ND	0.03	0.073	1.5	1.3	28	0.49
DB	19	0.09	ND	0.03	0.02	0.018	0.12
BBP	ND	0.2	ND	0.43	0.08	ND	1.7
DNP	ND	ND	ND	ND	ND	ND	ND
TPH-D	7100	130	240	200	300	1000	170
TPH-L	4400	ND	500	270	500	2300	ND
TPH-G	2500	ND	160	ND	ND	300	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS - DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS - LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS - GASOLINE

ND - NOT DETECTED
NT - NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 1:08pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\030162\01\030162\01-06.dwg FIG 6D

ANCHOR ENVIRONMENTAL, L.L.C.

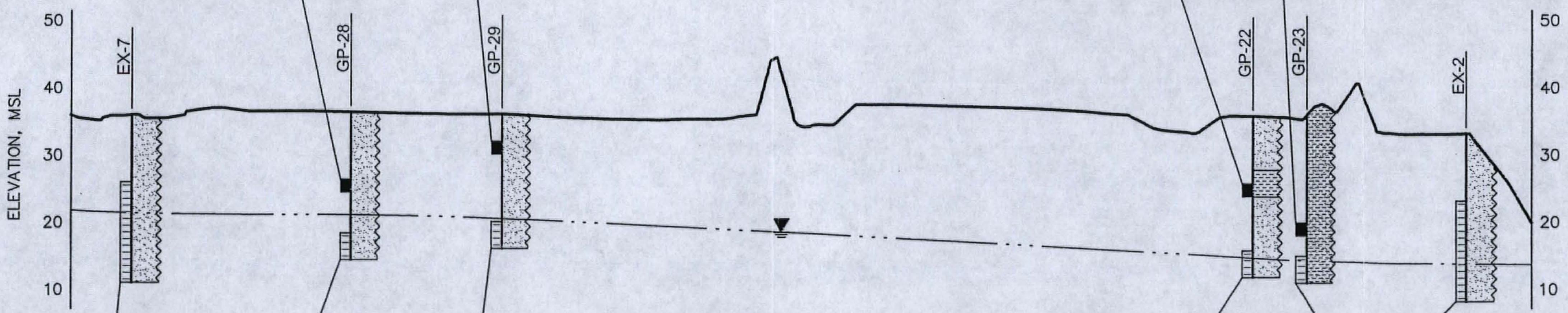
Figure 6D
Cross Section D-D'
McCall Oil and Chemical

GP-28	
VOCs	ND
HPAH	1
LPAH	ND
SVOCs	
4M	ND
DB	ND
BBP	ND
DNP	ND
TPH-D	ND
TPH-L	ND
TPH-G	ND

GP-29	
VOCs	ND
HPAH	13630
LPAH	21370
SVOCs	
4M	ND
DB	ND
BBP	ND
DNP	ND
TPH-D	18000
TPH-L	36000
TPH-G	710

GP-22	
VOCs	ND
HPAH	261
LPAH	512
SVOCs	
4M	ND
DB	32
BBP	ND
DNP	ND
TPH-D	310
TPH-L	160
TPH-G	17

GP-23	
VOCs	ND
HPAH	496
LPAH	154
SVOCs	
4M	60
DB	6
BBP	ND
DNP	ND
TPH-D	80
TPH-L	220
TPH-G	ND



EX-7	
VOCs	ND
HPAH	0.016
LPAH	ND
SVOCs	
4M	ND
DB	ND
BBP	ND
DNP	ND
TPH-D	ND
TPH-L	ND
TPH-G	ND

GP-28	
VOCs	ND
HPAH	1.64
LPAH	0.12
SVOCs	
4M	ND
DB	ND
BBP	0.25
DNP	ND
TPH-D	ND
TPH-L	ND
TPH-G	ND

GP-29	
VOCs	33
HPAH	3.91
LPAH	0.94
SVOCs	
4M	0.28
DB	ND
BBP	0.33
DNP	ND
TPH-D	ND
TPH-L	ND
TPH-G	ND

GP-22	
VOCs	ND
HPAH	0.406
LPAH	19.53
SVOCs	
4M	0.1
DB	0.86
BBP	0.098
DNP	ND
TPH-D	1100
TPH-L	ND
TPH-G	210

GP-23	
VOCs	ND
HPAH	0.205
LPAH	0.22
SVOCs	
4M	0.2
DB	0.097
BBP	0.05
DNP	ND
TPH-D	440
TPH-L	ND
TPH-G	ND

EX-2 (12/20/00)	
VOCs	ND
HPAH	0.10
LPAH	0.078
SVOCs	
4M	0.02
DB	ND
BBP	ND
DNP	ND
TPH-D	ND
TPH-L	ND
TPH-G	ND

TABLE DESCRIPTIONS

GP-1	
GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS - DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS - LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS - GASOLINE

ND - NOT DETECTED
NT - NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

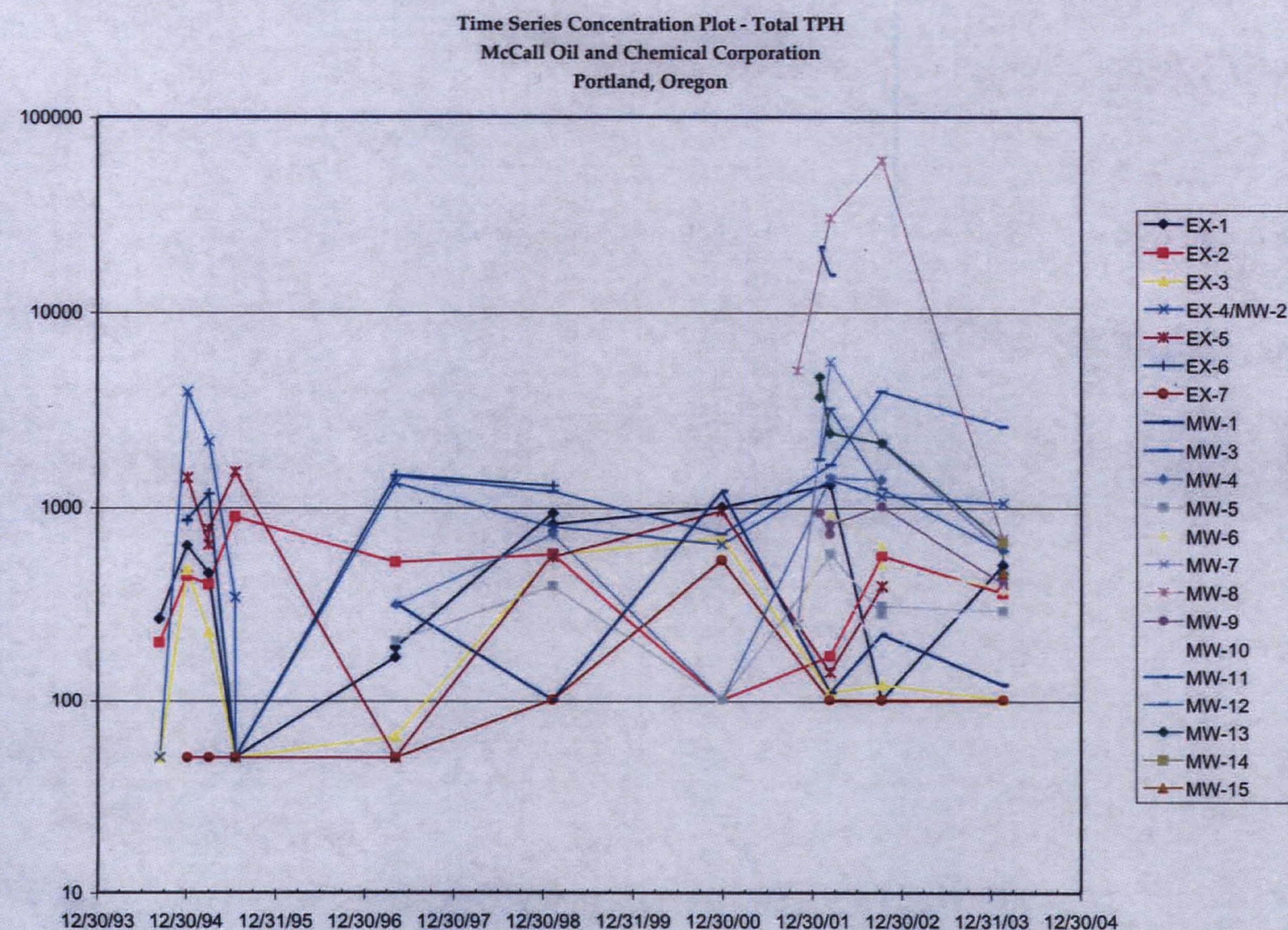
Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

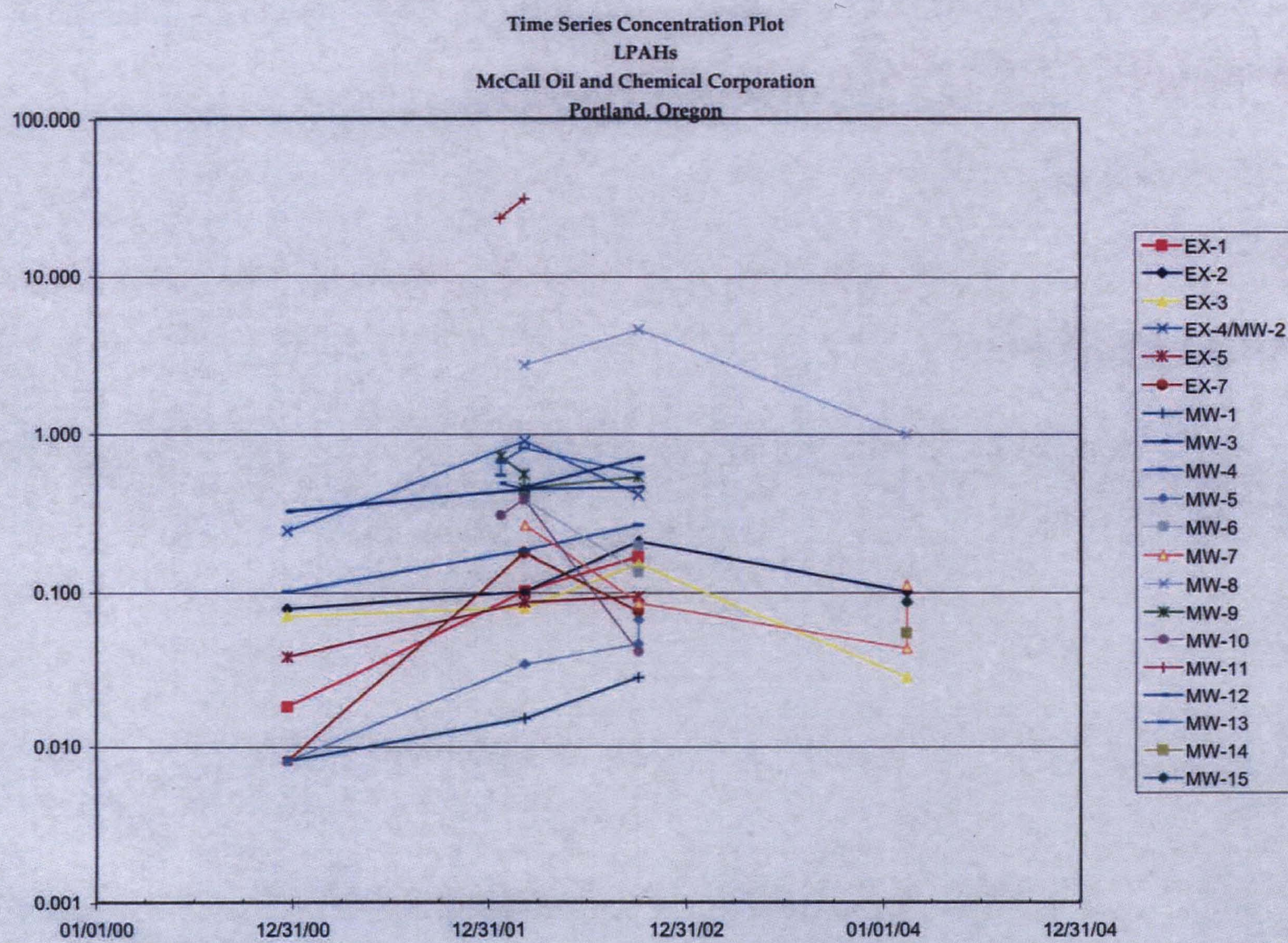
Note: Drawing modified from electronic file provided by IT Corporation.

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6E
Cross Section E-E'
McCall Oil and Chemical

May 09, 2003 1:11pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-07.dwg FIG 6E


Time Series Concentration Plot - Total TPH
McCall Oil and Chemical Corporation
Portland, Oregon
100000
10000
1000
100
10
12/30/93
12/30/94
12/31/95
12/30/96
12/30/97
12/30/98
12/31/99
12/30/00
12/30/01
12/30/02
12/31/03
12/30/04
EX-1
EX-2
EX-3
EX-4/MW-2
EX-5
EX-6
EX-7
MW-1
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15



Time Series Concentration Plot
LPAHs
McCall Oil and Chemical Corporation
Portland, Oregon
100.000
10.000
1.000
0.100
0.010
0.001
01/01/00
12/31/00
12/31/01
12/31/02
01/01/04
12/31/04
EX-1
EX-2
EX-3
EX-4/MW-2
EX-5
EX-7
MW-1
MW-3
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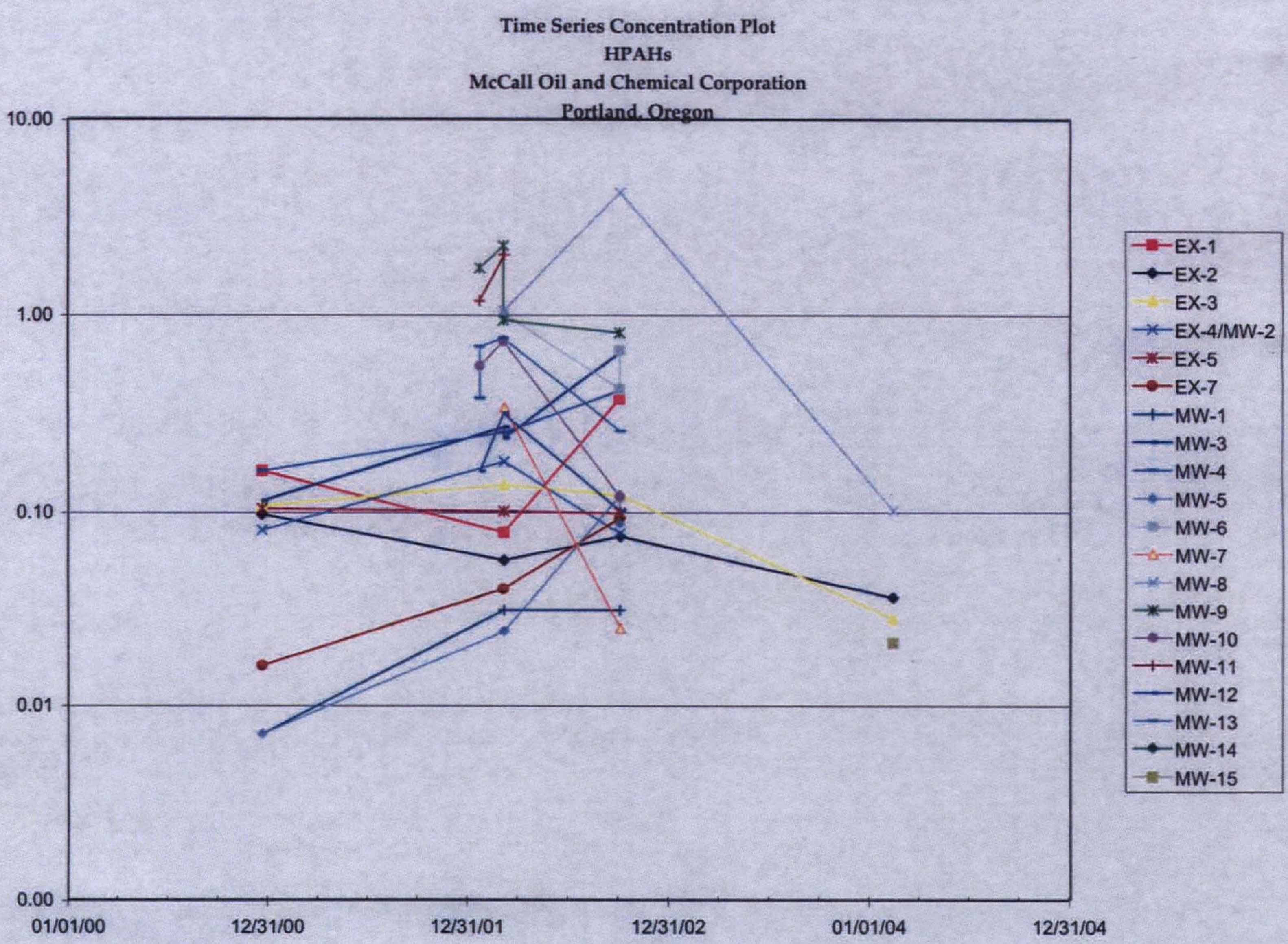
MW-11
MW-12
MW-13
MW-14
MW-15



Time Series Concentration Plot
HPAHs
McCall Oil and Chemical Corporation
Portland, Oregon
10.00
1.00
0.10
0.01
0.00
01/01/00
12/31/00
12/31/01
12/31/02
01/01/04
12/31/04
EX-1
EX-2
EX-3
EX-4/MW-2
EX-5
EX-7
MW-1
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

July 14, 2006
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Second Quarter 2006 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the second quarter 2006, and work planned for the third quarter 2006 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED SECOND QUARTER 2006

- data management and reporting
- project management and meetings

PLANNED THRID QUARTER 2006 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

No samples were collected in second quarter 2006 and no new data was generated.

PROBLEMS ENCOUNTERED

No problems were encountered during second quarter 2006.

If you have any questions, please let us know.

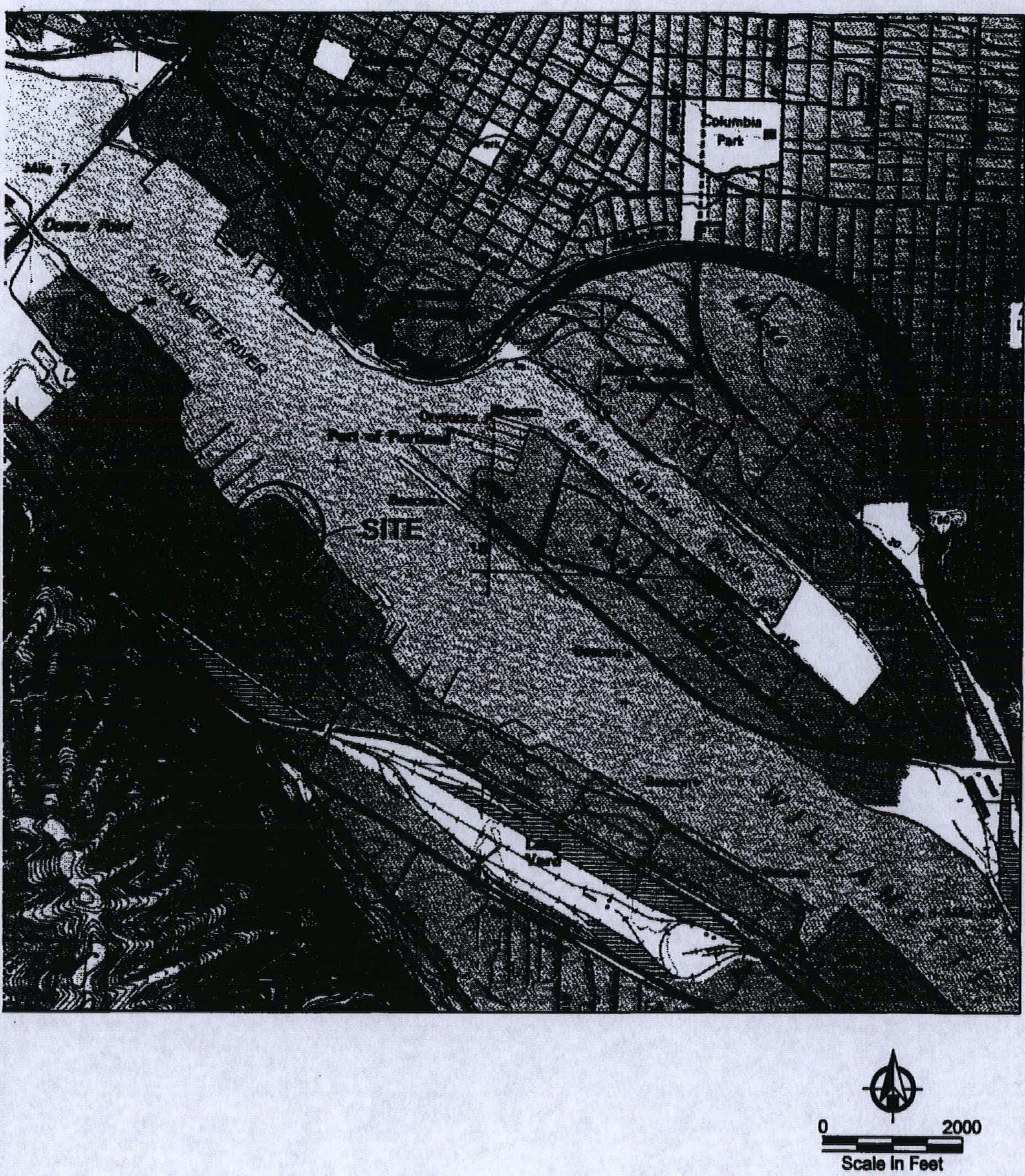
Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

FIGURES



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical

ANCHOR
ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

April 14, 2006
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: First Quarter 2006 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the first quarter 2006, and work planned for the second quarter 2006 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED FIRST QUARTER 2006

- data management and reporting
- project management and meetings

PLANNED SECOND QUARTER 2006 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

No samples were collected in first quarter 2006 and no new data was generated.

Problems Encountered

No problems were encountered during first quarter 2006.

If you have any questions, please let us know.

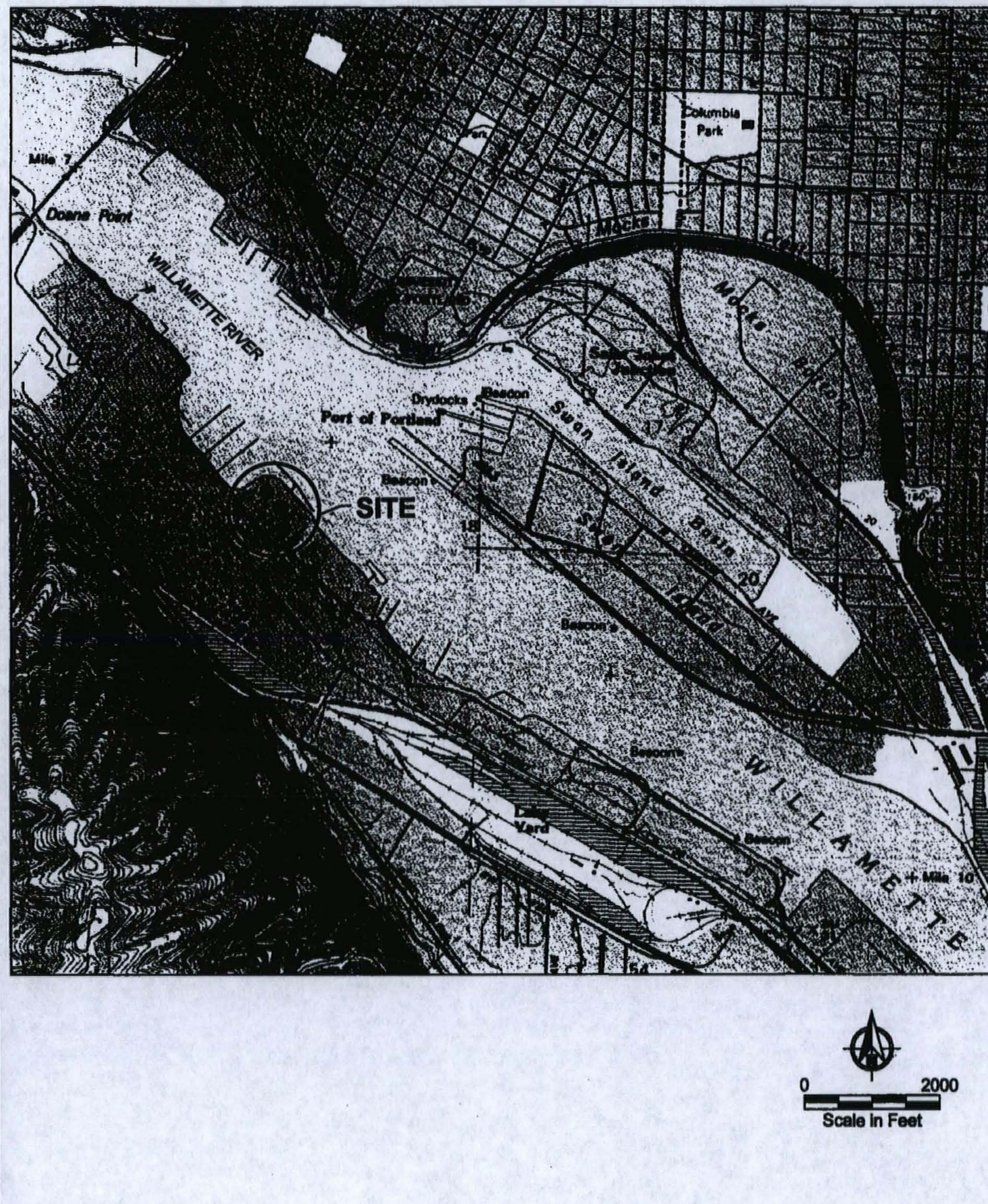
Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

FIGURES



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical

ANCHOR
ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

January 13, 2006
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Fourth Quarter 2005 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the fourth quarter 2005, and work planned for the first quarter 2005 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED FOURTH QUARTER 2005

- data management and reporting
- project management and meetings
- submitted comments on the Portland Harbor Interim Final Joint Source Control Strategy (JSCS)

PLANNED FIRST QUARTER 2006 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

No samples were collected in fourth quarter 2005 and no new data was generated.

Problems Encountered

No problems were encountered during fourth quarter 2005.

If you have any questions, please let us know.

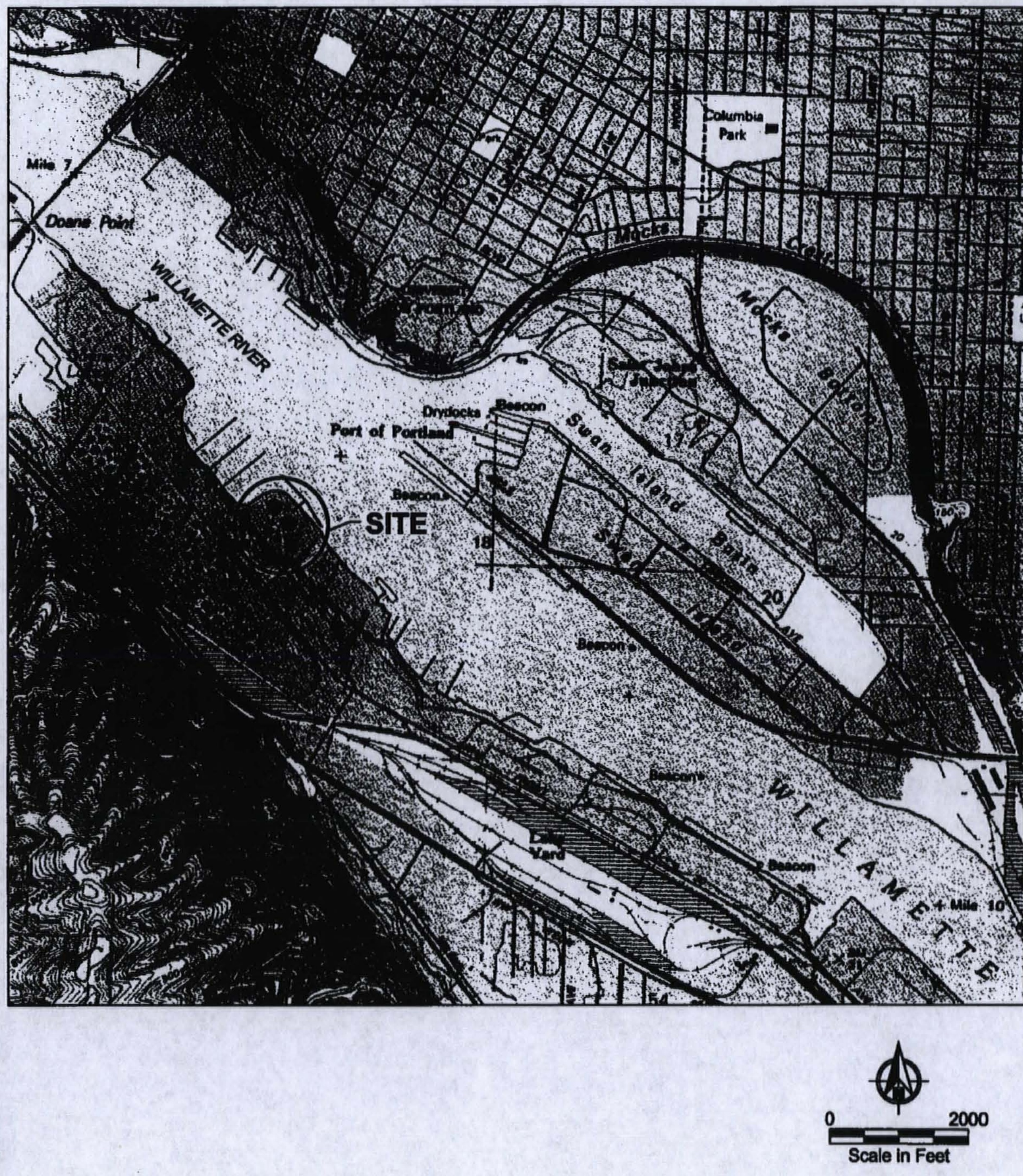
Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

FIGURES



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

October 14, 2005
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Third Quarter 2005 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the third quarter 2005, and work planned for the fourth quarter 2005 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED THIRD QUARTER 2005

- data management and reporting
- retrofitted catch basin S-3 and installed a fabric filter
- project management and meetings
- prepared comments on the Portland Harbor Interim Final Joint Source Control Strategy (JSCS)

PLANNED FOURTH QUARTER 2005 RI TASKS

- data management and reporting
- project management and meetings
- submit comments on JSCS to DEQ (October 10, 2005)

RESULTS

No samples were collected in third quarter 2005 and no new data was generated.

Problems Encountered
No problems were encountered during third quarter 2005.

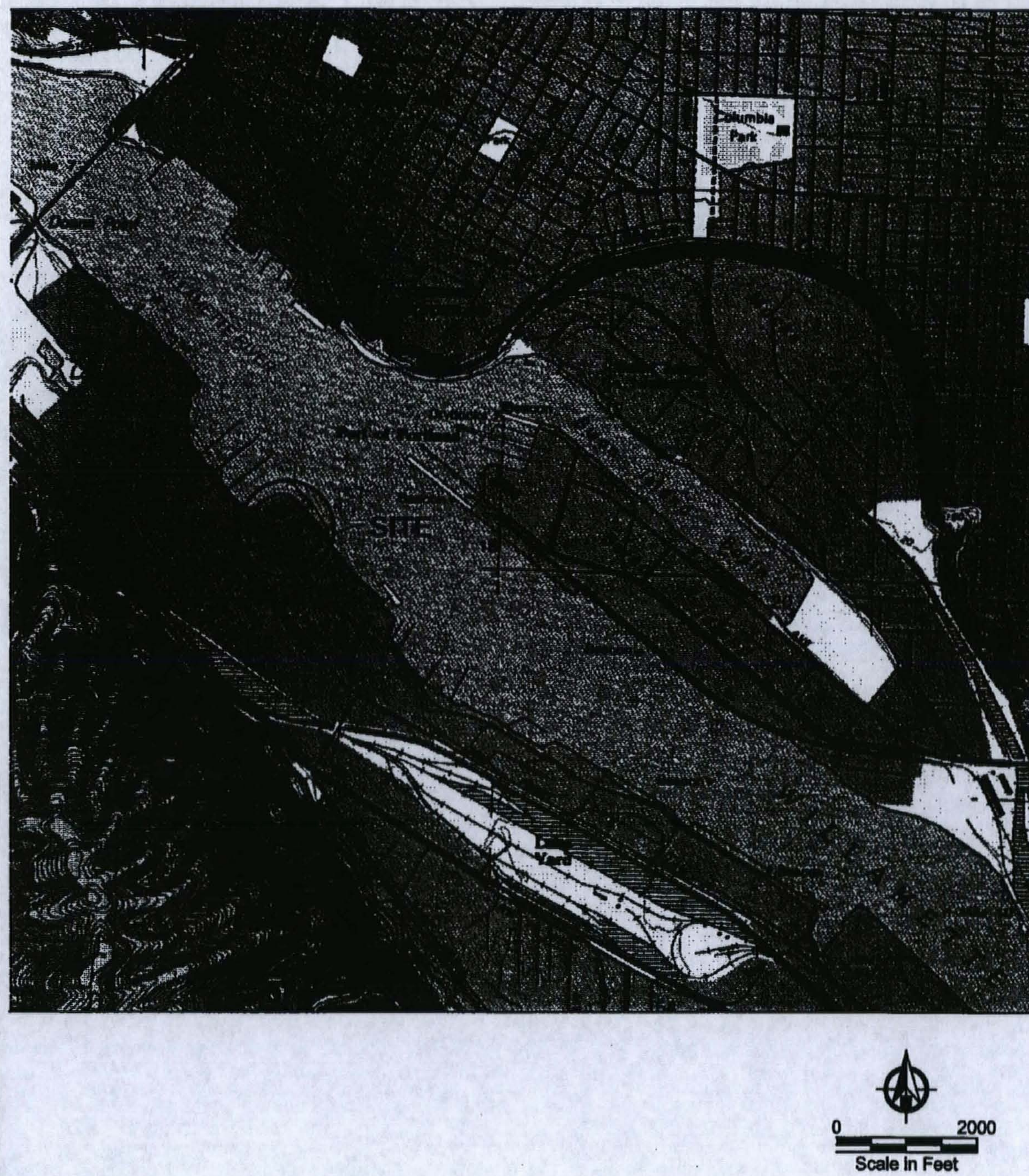
If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

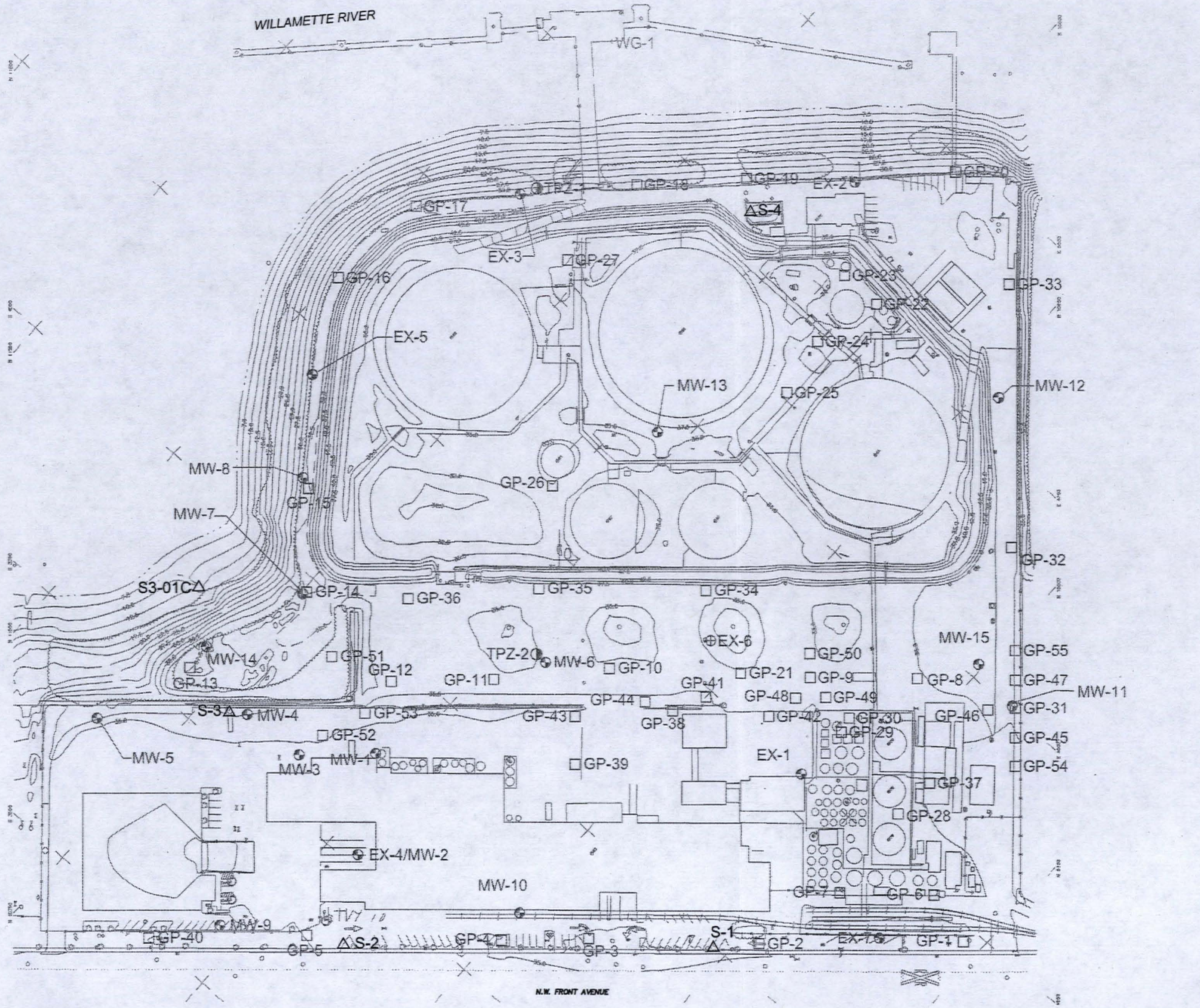


May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical

FIGURES



Horizontal Datum
Coordinates are on a local plane and are assumed.

Elevation Datum
Elevations are based on City of Portland Benchmark #2528.
Elevation = 34.64 Feet

Note: Figure prepared from base map provided by IT Corporation.

Jun 23, 2005 9:54am cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-18.dwg FIG 2

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Stormwater Sample Location Map
McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

June 23, 2005
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Second Quarter 2005 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the second quarter 2005, and work planned for the third quarter 2005 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED SECOND QUARTER 2005

- data management and reporting
- collected storm water samples from the four locations identified in the RI workplan
- responded to DEQ's February 22, 2005 comment letter on April 5, 2005
- project management and meetings

PLANNED THIRD QUARTER 2005 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

On April 7, 2005, storm water samples were collected from the four locations identified in the RI workplan (S-1 through S-4). The locations of the storm water samples are shown in Figure 2. Samples from catch basins S-1 and S-2 were collected in advance of the filter fabric, sample S-3 was collected from the outfall, and S-4 was collected from the oil-water separator. Samples were test for the analytes outlined in the RI Workplan (Polynuclear Aromatic Hydrocarbons, Semi-volatile Organic Compounds, Total Petroleum Hydrocarbons, and total and dissolved metals). Copies of the field sampling data sheets are in Attachment A. The laboratory report and chain of custody documentation are in Attachment B. Review of the sampling and laboratory records revealed that the data were judged to be acceptable for their intended use.

The field and laboratory data are presented in Tables 1 through 3 as follows.

Table 1	Total Petroleum Hydrocarbons - Stormwater
Table 2	PAHs and SVOCs - Stormwater
Table 3	Metals – Stormwater

Problems Encountered
No problems were encountered during second quarter 2005.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

TABLES

Table 1
Total Petroleum Hydrocarbons
Stormwater
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Catch Basins - Storm Water µg/L (ppb)							
S-1W	12/20/00	**1,100**	Z	100	U	250	U
S-1W	03/06/02	110	U	110	U	270	U
S-1W	04/07/05	100	U	**340**	H	**880**	O
S-2W	12/20/00	100	U	100	U	250	U
S-2W	03/06/02	**130**	Z	110	U	260	U
S-2W	04/07/05	100	U	**310**	Y	**430**	O
S-3W	02/15/01	**1,300**	Z	**510**	Z	250	U
S-3W	03/06/02	110	U	**110**	Z	260	U
S-3W	04/07/05	**120**	Z	**550**	Y	**1,000**	O
Oil/Water Separator - Storm Water							
S-4W	02/15/01	**270**	Z	**280**	Z	250	U
S-4W Duplicate	02/15/01	**260**	Z	**300**	Z	250	U
S-4W	04/09/02	**220**	H	**1,300**	F	**550**	O
S-4W	04/07/05	100	U	**440**	Y	**340**	L

Notes: U = Not detected at method reporting limit. F = The fingerprint of the sample matches the elution pattern of calibration standard
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.
Z = The fingerprint does not resemble a petroleum product.
DET= Detected above method reporting limit (method reporting limit shown)
D = The reported result is from a dilution.

Table 3
Metals
Stormwater
McCall Oil and Chemical

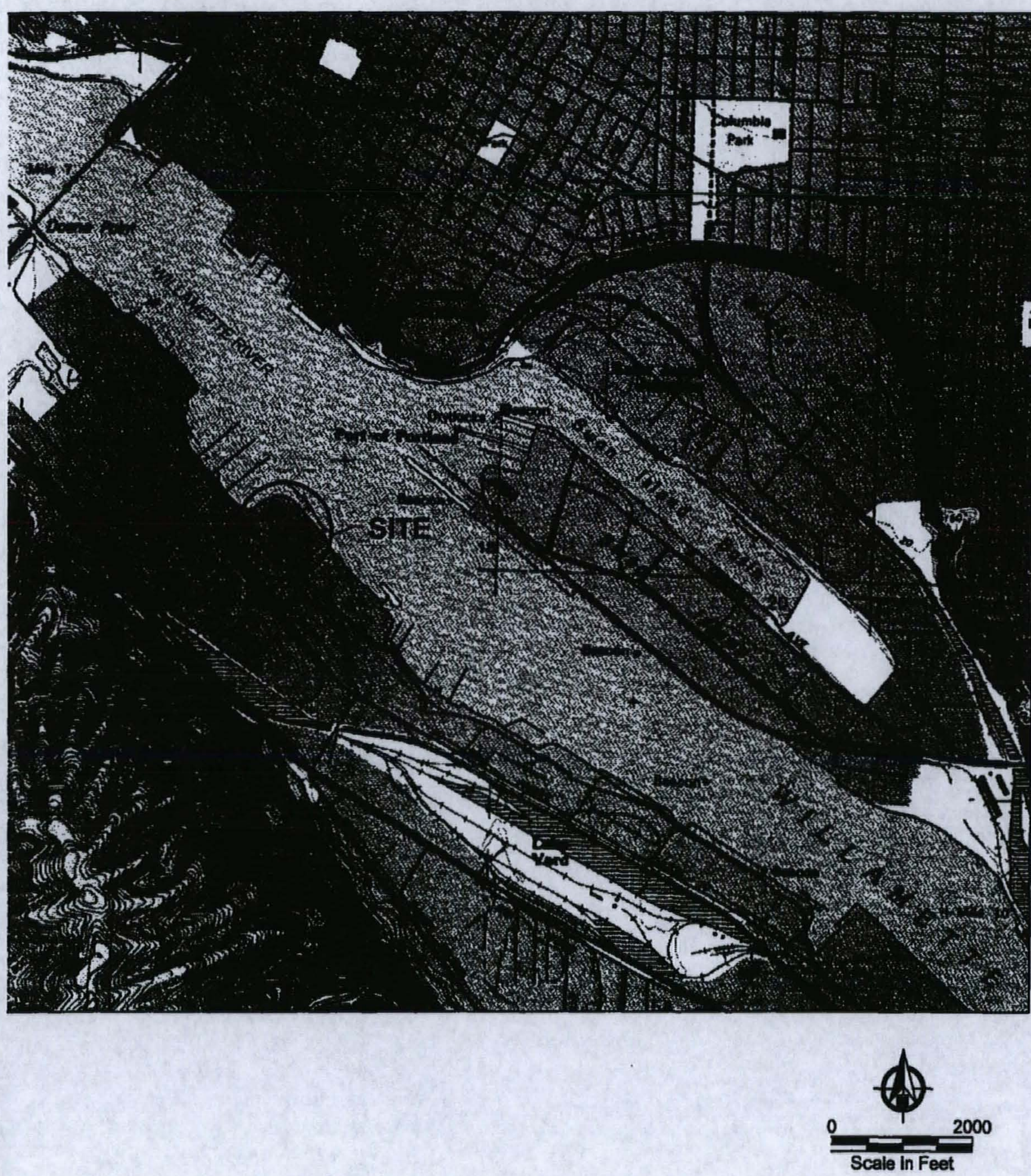
Location		Matrix	Date Sampled	Arsenic		Cadmium		Chromium	Copper	Lead	Zinc
Catch Basins - Storm Water µg/L (ppb)											
S-1W	Total	Water	12/20/00	0.5	U	0.05	U	0.4	3.8	0.43	200
S-1W	Total	Water	03/06/02	0.5	U	0.20	U	0.4	3.7	0.31	195
S-1W	Total	Water	04/07/05	0.5	U	0.16		7	13.5	27.1	86.9
S-1W	Dissolved	Water	04/07/05	0.5	U	0.07		1.3	7.9	0.61	47.8
S-2W	Total	Water	12/20/00	1	U	0.22		2.0	9.9	5.93	113
S-2W	Total	Water	03/06/02	0.5	U	0.20	U	0.6	10.3	1.13	73.3
S-2W	Total	Water	04/07/05	0.5	U	0.07		1.1	9.4	2.33	51.1
S-2W	Dissolved	Water	04/07/05	0.5	U	0.05		0.7	6.0	0.7	42.9
S-3W	Dissolved	Water	12/15/00	1	U	0.63		2.9	29.6	1.62	596
S-3W	Total	Water	03/06/02	0.5	U	0.2	U	1.2	13.1	2.30	84.2
S-3W	Total	Water	04/07/05	0.5	U	1.05		1.9	8.6	4.14	189
S-3W	Dissolved	Water	04/07/05	0.5	U	0.96		1.3	7.1	1.06	182
Oil/Water Separator - Storm Water µg/L (ppb)											
S-4W	Dissolved	Water	12/15/00	0.5	U	0.22		0.8	4.9	0.05	47.1
S-4W Duplicate	Dissolved	Water	12/15/00	0.5	U	0.21		0.6	4.7	0.04	45.0
S-4W	Total	Water	04/09/02	0.6		0.2		0.9	9	3.29	86.6
S-4W	Total	Water	04/07/05	0.5		0.19		1.1	8.3	6.15	89.8
S-4W	Dissolved	Water	04/07/05	0.5	U	0.09		0.2	4.4	0.09	46.8

Note: U = not detected at method reporting limit. µg/L = micrograms per liter. ppb = parts per billion.

FIGURES

TABLE 2
PAHs and SVOCs (µg/L)
Stormwater
McCall Oil and Chemical

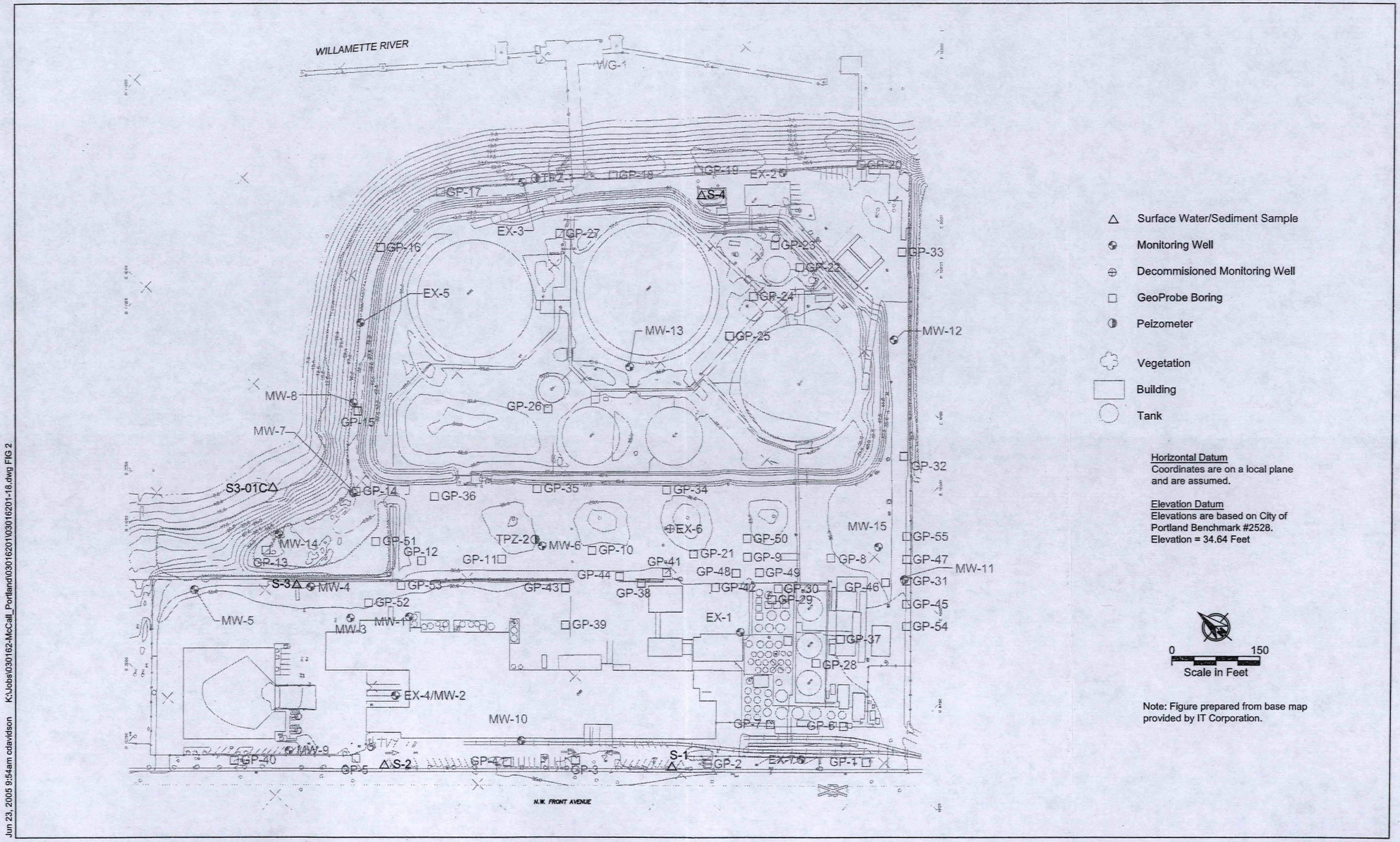
	Storm Water												
Sample Designation	S-1	S-1	S-1	S-2	S-2	S-2	S-3	S-3	S-3	S-4	S-4 Duplicate	S-4	S-4
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/06/02	04/07/05	12/20/00	03/06/02	04/07/05	12/20/00	03/06/02	04/07/05	12/20/00	12/20/00	04/09/02	04/07/05
	LPAHs												
Naphthalene	**0.03** J	**0.03** J	**0.031** J	**0.07** J	**0.025** J	0.012 U	**0.07** J	**0.025** J	0.012 U	**0.04** J	**0.04** J	0.012 U	0.012 U
Acenaphthylene	**0.006** J	0.011 U	**0.037** J	**0.02** J	0.011 U	**0.026** J	0.095 U	0.011 U	0.011 U	0.095 U	0.096 U	0.011 U	0.011 U
Acenaphthene	**0.02** J	0.0088 U	0.0088 U	**0.02** J	0.0092 U	0.0088 U	0.095 U	0.0089 U	0.0088 U	**0.14**	**0.12**	**0.085** J	0.009 U
Fluorene	**0.02** J	0.012 U	**0.026** J	**0.04** J	0.013 U	0.012 U	**0.02** J	0.013 U	0.012 U	**0.36**	**0.34**	**0.17** J	0.01 U
Phenanthrene	**0.07** J	**0.032** J	**0.190** J	**0.25**	**0.043** J	**0.045** J	**0.20**	**0.054** J	**0.057** J	**0.46**	**0.35**	**0.073** J	**0.032** J
Anthracene	0.006 U	0.015 U	**0.039** J	**0.02** J	0.016 U	0.015 U	0.095 U	0.015 U	0.015 U	**0.02** J	**0.01** J	0.015 U	0.015 U
2-Methylnaphthalene	**0.03** J	**0.016** J	0.012 U	**0.05** J	**0.014** J	0.012 U	**0.096**	0.012 U	0.012 U	**0.09** J	**0.10**	0.012 U	0.012 U
Total LPAH	**0.176**	**0.078**	**0.323**	**0.470**	**0.082**	**0.071**	**0.386**	**0.079**	**0.057**	**1.110**	**0.960**	**0.328**	**0.032**
	HPAHs												
Fluoranthene	**0.02** J	0.013 U	**0.230**	**0.099**	**0.022** J	**0.059** J	**0.06** J	**0.023** J	**0.040** J	**0.06** J	**0.05** J	0.01 U	0.01 U
Pyrene	**0.02** J	0.015 U	**0.280**	**0.12**	**0.025** J	**0.059** J	**0.03** J	**0.022** J	**0.037** J	**0.19**	**0.16**	**0.10** J	**0.10** J
Benz(a)anthracene	0.005 U	0.012 U	**0.081** J	**0.03** J	0.013 U	0.012 U	**0.007** J	0.012 U	0.012 U	**0.03** J	**0.02** J	0.012 U	0.012 U
Chrysene	**0.008** J	0.014 U	**0.140** J	**0.06** J	0.015 U	0.014 U	**0.03** J	0.015 U	0.014 U	**0.12**	**0.09** J	0.014 U	0.014 U
Benzo(b)fluoranthene	**0.006** J	0.020 U	**0.150** J	**0.04** J	0.021 U	**0.021** J	**0.01** J	0.020 U	0.020 U	**0.03** J	**0.03** J	0.020 U	0.020 U
Benzo(k)fluoranthene	**0.004** J	0.020 U	**0.049** J	**0.03** J	0.021 U	0.020 U	**0.008** J	0.020 U	0.020 U	**0.02** J	**0.01** J	0.020 U	0.020 U
Benzo(a)pyrene	0.006 U	0.016 U	**0.100** J	**0.03** J	0.017 U	0.020 U	0.095 U	0.017 U	0.016 U	**0.03** J	**0.02** J	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	**0.006** J	0.024 U	**0.089** J	**0.04** J	0.026 U	0.020 U	**0.01** J	0.025 U	0.024 U	**0.02** J	**0.02** J	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.004 U	0.031 U	0.031 U	**0.009** J	0.032 U	0.020 U	0.19 U	0.031 U	0.031 U	**0.009** J	**0.008** J	0.031 U	0.031 U
Benzo(g,h,i)perylene	**0.007** J	0.017 U	**0.140** J	**0.06** J	0.018 U	0.020 U	**0.01** J	0.017 U	0.017 U	**0.04** J	**0.03** J	0.017 U	0.017 U
Total HPAHs	**0.071**		**1.26**	**0.52**	**0.047**	**0.139**	**0.17**	**0.045**	**0.077**	**0.55**	**0.44**	**0.10**	**0.10**
	SVOCs												
3- and 4-Methylphenol Coelution	**0.3** J	**0.23** J	0.051 U	**0.49**	**0.089** J	0.051 U	0.48 U	**0.220** J	**0.120** J	**0.2** J	**0.2** J	0.051 U	0.051 U
Dibenzofuran	**0.01** J	0.014 U	0.014 U	**0.02** J	0.014 U	0.014 U	**0.01** U	**0.019** J	0.014 U	**0.13**	**0.11**	**0.11** J	0.01 U
Butyl Benzyl Phthalate	**0.1** J	**0.19** J	**0.20**	**0.1** J	**0.05** J	**0.076** J	**0.08** J	**0.092** J	**0.089** J	**0.05** J	**0.04** J	**0.14** J	**0.10** J
Di-n-octyl Phthalate	0.003 U	0.032 U	0.032 U	0.003 U	0.032 U	**0.11** J	0.95 U	0.033 U	0.032 U	0.95 U	0.96 U	0.032 U	0.032 U



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030182-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical



ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Stormwater Sample Location Map
McCall Oil and Chemical

ATTACHMENT A

FIELD SAMPLING DATA SHEETS

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** S-1
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 040705-3 -
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN			?	TEMPERATURE:	°F 44 .	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
4/7/05	15:00	NA	.	.	.	.	~~X 1~~	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	4/7/05	15:20	B	2	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		✓
White Poly	/ /	:		1	250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FIQ) (PAH) + 4 SVOCs
WHITE - Poly	TSS
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu) Cd Pb Zn
RED DISSOLVED - Poly	(As) (Cr) (Cu) Cd Pb Zn

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]		Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	.	.		.		.	
2	B	.	.		.		.	
1	B	.	.		.		.	
0	B	0.00	7.49	57	13.21		7.01	Clear/Colorless

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** S-2
SITE ADDRESS: Portland, OR **BLIND ID:** MO-040705-4
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?	TEMPERATURE:	°F 44				

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
4/7/05	13:50	NA	.	.	.	.	~~X1~~	?
/ /	:	.	.	.	.		X3	.

Gal/ft = (dia./2)² x 0.163	NA ~~0.041~~	2" =	0.163	3" =	~~0.367~~	~~4" =~~	0.653	~~6" =~~	~~1.469~~	10" =	~~4.080~~	~~12" =~~	~~5.875~~

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	& Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	4/7/05	14:40	B	2	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		✓
White Poly	/ /	:		1	250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			
		Total Bottles (include duplicate count):								

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH) + 4 SVOCs
WHITE - Poly	TSS
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu) Cd Pb Zn
RED DISSOLVED - Poly	(As) (Cr) (Cu) Cd Pb Zn

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	.	.		.		.	
2	B	.	.		.		.	
1	B	.	.		.		.	
0	B	0.00	7.23	64	13.41		6.42	Clear/Colorless

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.

6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** S-3

SITE ADDRESS: Portland, OR **BLIND ID:** MO- 040705-2 -

DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN			?	TEMPERATURE:	°F 42 .	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
4/7/05	13:00	NA .	.	.	.	.	X1	.
/ /	:	.	.	.	.	.	X3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

NA

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Grab

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	4/7/05	13:40	G	2	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		√
White Poly	/ /	:		1	250, 500, 1L	None	YES	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	~~(8260B)~~
AMBER - Glass	(TPH-HCID) (PAH) 4 - 65 VOCs
WHITE - Poly	TSS
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu) Pb Cd Zn
RED DISSOLVED - Poly	(As) (Cr) (Cu) Pb Cd Zn

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	[redacted]	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3	B	.	.		.		.	
2	B	.	.		.		.	
1	B	.	.		.		.	
0	G	0.00	7.36	41	13.64		7.99	Clear / Colorless
[Casing]	[Select A-G]	[Cumulative Totals]			[Circle units]			[Clarity, Color]

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** S-4 (SEPERATOR)
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 040705-1
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?	TEMPERATURE:	°F 44				

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
4/07/05	12:00	NA		NA			X1	N.A
/ /	:	.	.	.	.		X3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875 — NA

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Grab

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	4/7/05	12:30	G	2	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		✓
White Poly	/ /	:		1	250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) PAH + SVOCs
WHITE - Poly	TSS
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu) Cd Pb Zn
RED DISSOLVED - Poly	(As) (Cr) (Cu) Cd Pb ZN

WATER QUALITY DATA Purge Start Time: N:A Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	.	.		.		.	
2	B	.	.		.		.	
1	B	.	.		.		.	
0	Grab	0.00	7.37	40	12.41		7.05	Slight cloudy tan

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE)

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: ______

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC # ______

PROJECT NAME: McCall Oil - PORTLAND (PDX)
PROJECT NUMBER:
PROJECT MANAGER: JOHN RENDA
COMPANY/ADDRESS: ANCHOR ENVIRONMENTAL, LLC
6650 SW REDWOOD LN., #110
CITY/STATE/ZIP: PORTLAND, OR 97224
E-MAIL ADDRESS: JRENDA@ANCHORENV.COM
PHONE: 503-670-1108 x12 FAX: 503-670-1128
SAMPLER'S SIGNATURE: Timothy T. Stone

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Fuel Fingerprint (FIQ) ☐ NW-HCID Screen ☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved (See list below)	Cyanide☐ Hex-Chrom☐	pH, Cond, Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	TPH GC-FID (FIQ)*	PAHs + 4-SVOCs			REMARKS
MO-040705-1	4/7/05	1230		H_2O	5										X		X			X	X			
- -2	↓	1340		↓	↓										X		X			X	X			
- -3	↓	1520		↓	↓										X		X			X	X			
- -4	↓	1440		↓	↓										X		X			X	X			

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # ______
Bill To: ______

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

______
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* 4-SVOCs: 4-methylphenol, Butylbenzylphthalate, ~~Butylbenzylphthalate~~, Di-n-octylphthalate, Dibenzofuran

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Tim Stone Date/Time: 4/8/05-0800	Signature Date/Time	Signature Date/Time	Signature Date/Time
Printed Name: Tim Stone Firm: ANCHOR-PDX	Printed Name Firm	Printed Name Firm	Printed Name Firm

ATTACHMENT B

LABORATORY REPORT
AND
CHAIN OF CUSTODY DOCUMENTATION

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

May 10, 2005 Service Request No: K2502588

John Renda
Anchor Environmental
6650 SW Redwood Lane Suite 110
Portland, OR 97224

RE: McCall Oil Portland (PDX)/021062-02

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on April 8, 2005. For your reference, these analyses have been assigned our service request number K2502588.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281.

Respectfully submitted,

Columbia Analytical Services, Inc.

FOR
Abbie Spielman
Project Chemist

AS/dj

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- \# The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- \# The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- \+ The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- \# The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Anchor Environmental	**Service Request No.:**	K2502588
Project:	McCall Oil	**Date Received:**	4/8/05
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Four water samples were received for analysis at Columbia Analytical Services on 4/8/05. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Zinc for sample MO-040705-1 is not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Fuel Identification and Quantification by EPA Method 8015B

Sample Notes and Discussion:
The Gasoline results are semi-quantitative. Results are expected to exhibit a low bias due to a potential loss of volatile compounds during the extraction process.

No anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL4416: Benzoic Acid, 2-Methyl-4, 6-dinitrophenol, Pentachlorophenol. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 7.7%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No anomalies associated with the analysis of these samples were observed.

Approved by Amé Aprelin **Date** 5/9/05

Chain of Custody Documentation

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: K2502588

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC #

PROJECT NAME McCall Oil - PORTLAND (PDX)
PROJECT NUMBER
PROJECT MANAGER JOHN RENDA
COMPANY/ADDRESS ANCHOR ENVIRONMENTAL, LLC
6650 SW REDWOOD LN., #110
CITY/STATE/ZIP PORTLAND, OR 97224
E-MAIL ADDRESS JRENDA@ANCHORENV.COM
PHONE # 503-670-1108 x 12 FAX# 503-670-1128
SAMPLER'S SIGNATURE

. 000067

Analysis columns: NUMBER OF CONTAINERS; Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐; Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐; Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐; Fuel Fingerprint (FID) ☐ NW-HCID Screen; Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐; PCB's Aroclors☐ Congeners☐; Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐; Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐; PAHS 8310☐ SIM☐; Metals, (Total or Dissolved) (See list below); Cyanide☐; Hex-Chrom☐; pH, Cond, Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle); NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3; TOX 9020☐ AOX 1650☐ 506☐; TPH GC-FID (FID); PAHs + 4-SVOCs *

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics	Volatile Organics	Hydrocarbons	Fuel Fingerprint	Oil & Grease	PCB's	Pesticides/Herbicides	Chlorophenolics	PAHS	Metals	Cyanide	Hex-Chrom	pH, Cond...	NH3-N, COD...	TOX	TPH GC-FID (FID)	PAHs + 4-SVOCs *			REMARKS
MO-040705-1	4/7/05	1230		H2O	5										X		X				X	X			
-2	↓	1340		↓	↓										X		X				X	X			
-3	↓	1520		↓	↓										X		X				X	X			
-4	↓	1440		↓	↓										X		X				X	X			

REPORT REQUIREMENTS

__ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
__ III. Data Validation Report (includes all raw data)
__ IV. CLP Deliverable Report
__ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

__ 24 hr. __ 48 hr.
__ 5 Day
X Standard (10-15 working days)
__ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* 4-SVOCs: 4-methylphenol, Butylbenzylphthalate, ~~Butylbenzylphthalate~~, Di-n-octylphthalate, Dibenzofuran

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 4/8/05-0800	Signature: Tracy Black Date/Time: 4/8/05 1520	Signature Date/Time	Signature Date/Time
Printed Name: Tim Stone Firm: ANCHOR-PDX	Printed Name: Black Firm: CAS	Printed Name Firm	Printed Name Firm

RCOC #1 06/03

Columbia Analytical Services Inc. PC Abbie
Cooler Receipt and Preservation Form

Project/Client Anchor (McCall Oil) Work Order K250 2588

Cooler received on 4-8-05 and opened on 4-8-05 by bw

1.	Were custody seals on outside of coolers? If yes, how many and where? 1 Front	Y	N
2.	Were custody seals intact?	Y	N
3.	Were signature and date present on the custody seals?	Y	N
4.	Is the shipper's airbill available and filed? If no, record airbill number: CAS Courier	~~Y~~	~~N~~
5.	COC#		
	Temperature of cooler(s) upon receipt: (°C) 3.1		
	Temperature Blank: (°C) 2.6		
	Were samples hand delivered on the same day as collection?	~~Y~~	~~N~~
6.	Were custody papers properly filled out (ink, signed, etc.)?	Y	N
7.	Type of packing material present mesh sleeves, bubblewrap, ice water		
8.	**Did all bottles arrive in good condition (unbroken)?**	Y	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?	Y	N
10.	Did all bottle labels and tags agree with custody papers?	Y	N
11.	**Were the correct types of bottles used for the tests indicated?**	Y	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?	Y	N
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~
14.	Did the bottles originate from CAS/K or a branch laboratory?	Y	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**	~~Y~~	~~N~~
16.	Was C12/Res negative?	Y	N

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	Anchor Environmental	**Service Request :**	K2502588
Project Name :	McCall Oil Portland (PDX)	**Date Collected :**	04/07/05
Project Number :	021062-02	**Date Received :**	04/08/05
Sample Matrix :	Water		

Solids, Total Suspended (TSS)

Units : mg/L (ppm)
Basis : NA

Analysis Method 160.2
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MO-040705-1 S-4	K2502588-001	5	1	04/13/05	37	
MO-040705-2 S-3	K2502588-002	5	1	04/13/05	6	
MO-040705-3 S-1	K2502588-003	5	1	04/13/05	6	
MO-040705-4 S-2	K2502588-004	5	1	04/13/05	ND	
Method Blank	K2502588-MB	5	1	04/13/05	ND	

Report By: AYaple

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Anchor Environmental
Project Name : McCall Oil Portland (PDX)
Project Number : 021062-02
Sample Matrix : Water

Service Request : K2502588
Date Collected : NA
Date Received : NA
Date Extracted : NA
Date Analyzed : 04/13/05

Duplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K2502622-002DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	**Analysis Method**	**MRL**	**Sample Result**	**Duplicate Sample Result**	**Average**	**Relative Percent Difference**	**Result Notes**
Solids, Total Suspended (TSS)	160.2	5	38	46	42	19	

Report By: AYaple

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Anchor Environmental
Project Name : McCall Oil Portland (PDX)
Project Number : 021062-02
Sample Matrix : Water

Service Request : K2502588
Date Collected : NA
Date Received : NA
Date Extracted : NA
Date Analyzed : 04/13/05

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K2502588-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Solids, Total Suspended (TSS)	None	160.2	358	324	91	85-115	

Report By: AYaple

Metals

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Anchor Environmental — Service Request: K2502588

Project No.: 021062-02

Project Name: McCall Oil Portland (PDX)

Sample No.	Lab Sample ID.
MO-040705-1	K2502588-001
MO-040705-1	K2502588-001 DISS
MO-040705-1D	K2502588-001D
MO-040705-1S	K2502588-001S
MO-040705-2	K2502588-002
MO-040705-2	K2502588-002 DISS
MO-040705-3	K2502588-003
MO-040705-3	K2502588-003 DISS
MO-040705-4	K2502588-004
MO-040705-4	K2502588-004 DISS
Method Blank	K2502588-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: [signature]

Date: 5/2/05

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K2502588
Project No.:	021062-02	Date Collected:	04/07/05
Project Name:	McCall Oil Portland (PDX)	Date Received:	04/08/05
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: MO-040705-1 S-4 Lab Code: K2502588-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5		
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.19		
Chromium	200.8	0.2	1	4/20/05	4/26/05	1.1		
Copper	200.8	0.1	1	4/20/05	4/26/05	8.3		
Lead	200.8	0.02	1	4/20/05	4/26/05	6.15		
Zinc	200.8	0.5	1	4/20/05	4/26/05	89.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected: 04/07/05
Date Received: 04/08/05
Units: µG/L
Basis: NA

Sample Name: MO-040705-1 S-4

Lab Code: K2502588-001 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.09		
Chromium	200.8	0.2	1	4/20/05	4/26/05	0.2		
Copper	200.8	0.1	1	4/20/05	4/26/05	4.4		
Lead	200.8	0.02	1	4/20/05	4/26/05	0.09		
Zinc	200.8	0.5	1	4/20/05	4/26/05	46.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected: 04/07/05
Date Received: 04/08/05
Units: µG/L
Basis: NA

Sample Name: MO-040705-2 5-3 Lab Code: K2502588-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	1.05		
Chromium	200.8	0.2	1	4/20/05	4/26/05	1.9		
Copper	200.8	0.1	1	4/20/05	4/26/05	8.6		
Lead	200.8	0.02	1	4/20/05	4/26/05	4.14		
Zinc	200.8	0.5	1	4/20/05	4/26/05	189		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected: 04/07/05
Date Received: 04/08/05
Units: µG/L
Basis: NA

Sample Name: MO-040705-2 S-3

Lab Code: K2502588-002 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.96		
Chromium	200.8	0.2	1	4/20/05	4/26/05	1.3		
Copper	200.8	0.1	1	4/20/05	4/26/05	7.1		
Lead	200.8	0.02	1	4/20/05	4/26/05	1.06		
Zinc	200.8	0.5	1	4/20/05	4/26/05	182		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected: 04/07/05
Date Received: 04/08/05
Units: µG/L
Basis: NA

Sample Name: MO-040705-3 S-1 **Lab Code:** K2502588-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.16		
Chromium	200.8	0.2	1	4/20/05	4/26/05	7.0		
Copper	200.8	0.1	1	4/20/05	4/26/05	13.5		
Lead	200.8	0.02	1	4/20/05	4/26/05	27.1		
Zinc	200.8	0.5	1	4/20/05	4/26/05	86.9		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental

Project No.: 021062-02

Project Name: McCall Oil Portland (PDX)

Matrix: WATER

Service Request: K2502588

Date Collected: 04/07/05

Date Received: 04/08/05

Units: µG/L

Basis: NA

Sample Name: MO-040705-3 S1

Lab Code: K2502588-003 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.07		
Chromium	200.8	0.2	1	4/20/05	4/26/05	1.3		
Copper	200.8	0.1	1	4/20/05	4/26/05	7.9		
Lead	200.8	0.02	1	4/20/05	4/26/05	0.61		
Zinc	200.8	0.5	1	4/20/05	4/26/05	47.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected: 04/07/05
Date Received: 04/08/05
Units: µG/L
Basis: NA

Sample Name: MO-040705-4 S-2 **Lab Code:** K2502588-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.07		
Chromium	200.8	0.2	1	4/20/05	4/26/05	1.1		
Copper	200.8	0.1	1	4/20/05	4/26/05	10.3		
Lead	200.8	0.02	1	4/20/05	4/26/05	2.33		
Zinc	200.8	0.5	1	4/20/05	4/26/05	51.1		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected: 04/07/05
Date Received: 04/08/05
Units: µG/L
Basis: NA

Sample Name: MO-040705-4 S-2 Lab Code: K2502588-004 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.05		
Chromium	200.8	0.2	1	4/20/05	4/26/05	0.7		
Copper	200.8	0.1	1	4/20/05	4/26/05	9.4		
Lead	200.8	0.02	1	4/20/05	4/26/05	0.70		
Zinc	200.8	0.5	1	4/20/05	4/26/05	42.9		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank **Lab Code:** K2502588-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	4/20/05	4/26/05	0.5	U	
Cadmium	200.8	0.02	1	4/20/05	4/26/05	0.02	U	
Chromium	200.8	0.2	1	4/20/05	4/26/05	0.2	U	
Copper	200.8	0.1	1	4/20/05	4/26/05	0.1	U	
Lead	200.8	0.02	1	4/20/05	4/26/05	0.02	U	
Zinc	200.8	0.5	1	4/20/05	4/26/05	0.5	U	

% Solids: 0.0

Comments:

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: MO-040705-1S   Lab Code: K2502588-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	18.6		0.5		20.0	90		200.8
Cadmium	70 - 130	18.8		0.19		20.0	93		200.8
Chromium	70 - 130	19.8		1.1		20.0	93		200.8
Copper	70 - 130	26.7		8.3		20.0	92		200.8
Lead	70 - 130	24.8		6.15		20.0	93		200.8
Zinc		107		89.8		20.0	86		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: Anchor Environmental
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)
Matrix: WATER

Service Request: K2502588
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: MO-040705-1D   Lab Code: K2502588-001D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		0.5		0.5		3		200.8
Cadmium	20	0.19		0.19		2		200.8
Chromium	20	1.1		1.4		20		200.8
Copper	20	8.3		8.5		3		200.8
Lead	20	6.15		6.31		3		200.8
Zinc	20	89.8		91.1		1		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: Anchor Environmental
Service Request: K2502588
Project No.: 021062-02
Project Name: McCall Oil Portland (PDX)

Aqueous LCS Source: Inorganic Ventures
Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	20.0	19.0	95					
Cadmium	20.0	19.0	95					
Chromium	20.0	18.8	94					
Copper	20.0	19.0	95					
Lead	20.0	18.7	94					
Zinc	20.0	18.4	92					

Fuel Identification Quantification
EPA Method 8015

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-040705-1	**Units:**	ug/L
Lab Code:	K2502588-001 S-4	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	04/14/05	04/20/05	KWG0506011	
Diesel Range Organics (DRO)	**440**	**Y**	100	1	04/14/05	04/20/05	KWG0506011	
Residual Range Organics (RRO)	**340**	**L**	250	1	04/14/05	04/20/05	KWG0506011	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	60	33-133	04/20/05	Acceptable
o-Terphenyl	77	52-128	04/20/05	Acceptable
n-Triacontane	90	50-150	04/20/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-040705-2	**Units:**	ug/L
Lab Code:	K2502588-002 S-3	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	120	Z	100	1	04/14/05	04/20/05	KWG0506011	
Diesel Range Organics (DRO)	550	Y	100	1	04/14/05	04/20/05	KWG0506011	
Residual Range Organics (RRO)	1000	O	250	1	04/14/05	04/20/05	KWG0506011	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	64	33-133	04/20/05	Acceptable
o-Terphenyl	78	52-128	04/20/05	Acceptable
n-Triacontane	94	50-150	04/20/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-040705-3	**Units:**	ug/L
Lab Code:	K2502588-003 S-1	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	04/14/05	04/20/05	KWG0506011	
Diesel Range Organics (DRO)	**340**	H	100	1	04/14/05	04/20/05	KWG0506011	
Residual Range Organics (RRO)	**880**	O	250	1	04/14/05	04/20/05	KWG0506011	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	62	33-133	04/20/05	Acceptable
o-Terphenyl	73	52-128	04/20/05	Acceptable
n-Triacontane	89	50-150	04/20/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-040705-4	**Units:**	ug/L
Lab Code:	K2502588-004 S-2	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	04/14/05	04/20/05	KWG0506011	
Diesel Range Organics (DRO)	**310**	**Y**	100	1	04/14/05	04/20/05	KWG0506011	
Residual Range Organics (RRO)	**430**	**O**	250	1	04/14/05	04/20/05	KWG0506011	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	63	33-133	04/20/05	Acceptable
o-Terphenyl	71	52-128	04/20/05	Acceptable
n-Triacontane	84	50-150	04/20/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0506011-5	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	04/14/05	04/20/05	KWG0506011	
Diesel Range Organics (DRO)	ND	U	100	1	04/14/05	04/20/05	KWG0506011	
Residual Range Organics (RRO)	ND	U	250	1	04/14/05	04/20/05	KWG0506011	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	70	33-133	04/20/05	Acceptable
o-Terphenyl	77	52-128	04/20/05	Acceptable
n-Triacontane	89	50-150	04/20/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall Oil Portland (PDX)/021062-02
Sample Matrix: Water

Service Request: K2502588

Surrogate Recovery Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method: EPA 3510C
Analysis Method: 8015M

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MO-040705-1	K2502588-001	60	77	90
MO-040705-2	K2502588-002	64	78	94
MO-040705-3	K2502588-003	62	73	89
MO-040705-4	K2502588-004	63	71	84
Method Blank	KWG0506011-5	70	77	89
Lab Control Sample	KWG0506011-3	79	96	96
Duplicate Lab Control Sample	KWG0506011-4	85	101	102

Surrogate Recovery Control Limits (%)

Sur1 = 4-Bromofluorobenzene	33-133
Sur2 = o-Terphenyl	52-128
Sur3 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Extracted:**	04/14/2005
Sample Matrix:	Water	**Date Analyzed:**	04/23/2005

Lab Control Spike/Duplicate Lab Control Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method:	EPA 3510C	**Units:**	ug/L
Analysis Method:	8015M	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0506011

	Lab Control Sample KWG0506011-3 **Lab Control Spike**			Duplicate Lab Control Sample KWG0506011-4 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	3110	3200	97	3640	3200	114	67-151	16	30
Residual Range Organics (RRO)	1580	1600	99	1860	1600	116	59-146	16	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Semi-Volatile Organic Compounds
EPA Method 8270C

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-1 S-4	**Units:**	ug/L
Lab Code:	K2502588-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	04/12/05	04/27/05	KWG0505827	
Naphthalene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
2-Methylnaphthalene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
Acenaphthylene	ND	U	0.19	0.011	1	04/12/05	04/27/05	KWG0505827	
Acenaphthene	ND	U	0.19	0.0088	1	04/12/05	04/27/05	KWG0505827	
Dibenzofuran	ND	U	0.19	0.014	1	04/12/05	04/27/05	KWG0505827	
Fluorene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
Phenanthrene	**0.032**	J	0.19	0.011	1	04/12/05	04/27/05	KWG0505827	
Anthracene	ND	U	0.19	0.015	1	04/12/05	04/27/05	KWG0505827	
Fluoranthene	ND	U	0.19	0.013	1	04/12/05	04/27/05	KWG0505827	
Pyrene	**0.097**	J	0.19	0.015	1	04/12/05	04/27/05	KWG0505827	
Butyl Benzyl Phthalate	**0.10**	J	0.19	0.026	1	04/12/05	04/27/05	KWG0505827	
Benz(a)anthracene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
Chrysene	ND	U	0.19	0.014	1	04/12/05	04/27/05	KWG0505827	
Di-n-octyl Phthalate	ND	U	0.19	0.032	1	04/12/05	04/27/05	KWG0505827	
Benzo(b)fluoranthene	ND	U	0.19	0.020	1	04/12/05	04/27/05	KWG0505827	
Benzo(k)fluoranthene	ND	U	0.19	0.020	1	04/12/05	04/27/05	KWG0505827	
Benzo(a)pyrene	ND	U	0.19	0.016	1	04/12/05	04/27/05	KWG0505827	
Indeno(1,2,3-cd)pyrene	ND	U	0.19	0.024	1	04/12/05	04/27/05	KWG0505827	
Dibenz(a,h)anthracene	ND	U	0.19	0.031	1	04/12/05	04/27/05	KWG0505827	
Benzo(g,h,i)perylene	ND	U	0.19	0.017	1	04/12/05	04/27/05	KWG0505827	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	98	36-134	04/27/05	Acceptable
Nitrobenzene-d5	98	47-128	04/27/05	Acceptable
2-Fluorobiphenyl	92	41-117	04/27/05	Acceptable
Terphenyl-d14	110	32-155	04/27/05	Acceptable

Comments:

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-1	**Units:**	ug/L
Lab Code:	K2502588-001	**Basis:**	NA

† Analyte Comments	
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-2 S-3	**Units:**	ug/L
Lab Code:	K2502588-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	**0.12**	J	0.48	0.051	1	04/12/05	04/27/05	KWG0505827	
Naphthalene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
2-Methylnaphthalene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
Acenaphthylene	ND	U	0.19	0.011	1	04/12/05	04/27/05	KWG0505827	
Acenaphthene	ND	U	0.19	0.0088	1	04/12/05	04/27/05	KWG0505827	
Dibenzofuran	ND	U	0.19	0.014	1	04/12/05	04/27/05	KWG0505827	
Fluorene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
Phenanthrene	**0.057**	J	0.19	0.011	1	04/12/05	04/27/05	KWG0505827	
Anthracene	ND	U	0.19	0.015	1	04/12/05	04/27/05	KWG0505827	
Fluoranthene	**0.040**	J	0.19	0.013	1	04/12/05	04/27/05	KWG0505827	
Pyrene	**0.037**	J	0.19	0.015	1	04/12/05	04/27/05	KWG0505827	
Butyl Benzyl Phthalate	**0.089**	J	0.19	0.026	1	04/12/05	04/27/05	KWG0505827	
Benz(a)anthracene	ND	U	0.19	0.012	1	04/12/05	04/27/05	KWG0505827	
Chrysene	ND	U	0.19	0.014	1	04/12/05	04/27/05	KWG0505827	
Di-n-octyl Phthalate	ND	U	0.19	0.032	1	04/12/05	04/27/05	KWG0505827	
Benzo(b)fluoranthene	ND	U	0.19	0.020	1	04/12/05	04/27/05	KWG0505827	
Benzo(k)fluoranthene	ND	U	0.19	0.020	1	04/12/05	04/27/05	KWG0505827	
Benzo(a)pyrene	ND	U	0.19	0.016	1	04/12/05	04/27/05	KWG0505827	
Indeno(1,2,3-cd)pyrene	ND	U	0.19	0.024	1	04/12/05	04/27/05	KWG0505827	
Dibenz(a,h)anthracene	ND	U	0.19	0.031	1	04/12/05	04/27/05	KWG0505827	
Benzo(g,h,i)perylene	ND	U	0.19	0.017	1	04/12/05	04/27/05	KWG0505827	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	85	36-134	04/27/05	Acceptable
Nitrobenzene-d5	83	47-128	04/27/05	Acceptable
2-Fluorobiphenyl	87	41-117	04/27/05	Acceptable
Terphenyl-d14	93	32-155	04/27/05	Acceptable

Comments:

000036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-2	**Units:**	ug/L
Lab Code:	K2502588-002	**Basis:**	NA

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-3 S-1	**Units:**	ug/L
Lab Code:	K2502588-003	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	04/12/05	04/28/05	KWG0505827	
Naphthalene	**0.031**	J	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
2-Methylnaphthalene	ND	U	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
Acenaphthylene	**0.037**	J	0.20	0.011	1	04/12/05	04/28/05	KWG0505827	
Acenaphthene	ND	U	0.20	0.0088	1	04/12/05	04/28/05	KWG0505827	
Dibenzofuran	ND	U	0.20	0.014	1	04/12/05	04/28/05	KWG0505827	
Fluorene	**0.026**	J	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
Phenanthrene	**0.19**	J	0.20	0.011	1	04/12/05	04/28/05	KWG0505827	
Anthracene	**0.039**	J	0.20	0.015	1	04/12/05	04/28/05	KWG0505827	
Fluoranthene	**0.23**		0.20	0.013	1	04/12/05	04/28/05	KWG0505827	
Pyrene	**0.28**		0.20	0.015	1	04/12/05	04/28/05	KWG0505827	
Butyl Benzyl Phthalate	**0.20**		0.20	0.026	1	04/12/05	04/28/05	KWG0505827	
Benz(a)anthracene	**0.081**	J	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
Chrysene	**0.14**	J	0.20	0.014	1	04/12/05	04/28/05	KWG0505827	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	04/12/05	04/28/05	KWG0505827	
Benzo(b)fluoranthene	**0.15**	J	0.20	0.020	1	04/12/05	04/28/05	KWG0505827	
Benzo(k)fluoranthene	**0.049**	J	0.20	0.020	1	04/12/05	04/28/05	KWG0505827	
Benzo(a)pyrene	**0.10**	J	0.20	0.016	1	04/12/05	04/28/05	KWG0505827	
Indeno(1,2,3-cd)pyrene	**0.089**	J	0.20	0.024	1	04/12/05	04/28/05	KWG0505827	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	04/12/05	04/28/05	KWG0505827	
Benzo(g,h,i)perylene	**0.14**	J	0.20	0.017	1	04/12/05	04/28/05	KWG0505827	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	97	36-134	04/28/05	Acceptable
Nitrobenzene-d5	96	47-128	04/28/05	Acceptable
2-Fluorobiphenyl	94	41-117	04/28/05	Acceptable
Terphenyl-d14	100	32-155	04/28/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-3	**Units:**	ug/L
Lab Code:	K2502588-003	**Basis:**	NA

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-4 S-2	**Units:**	ug/L
Lab Code:	K2502588-004	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.49	0.051	1	04/12/05	04/28/05	KWG0505827	
Naphthalene	ND	U	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
2-Methylnaphthalene	ND	U	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
Acenaphthylene	**0.026**	J	0.20	0.011	1	04/12/05	04/28/05	KWG0505827	
Acenaphthene	ND	U	0.20	0.0088	1	04/12/05	04/28/05	KWG0505827	
Dibenzofuran	ND	U	0.20	0.014	1	04/12/05	04/28/05	KWG0505827	
Fluorene	ND	U	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
Phenanthrene	**0.045**	J	0.20	0.011	1	04/12/05	04/28/05	KWG0505827	
Anthracene	ND	U	0.20	0.015	1	04/12/05	04/28/05	KWG0505827	
Fluoranthene	**0.059**	J	0.20	0.013	1	04/12/05	04/28/05	KWG0505827	
Pyrene	**0.059**	J	0.20	0.015	1	04/12/05	04/28/05	KWG0505827	
Butyl Benzyl Phthalate	**0.076**	J	0.20	0.026	1	04/12/05	04/28/05	KWG0505827	
Benz(a)anthracene	ND	U	0.20	0.012	1	04/12/05	04/28/05	KWG0505827	
Chrysene	ND	U	0.20	0.014	1	04/12/05	04/28/05	KWG0505827	
Di-n-octyl Phthalate	**0.11**	J	0.20	0.032	1	04/12/05	04/28/05	KWG0505827	
Benzo(b)fluoranthene	**0.021**	J	0.20	0.020	1	04/12/05	04/28/05	KWG0505827	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	04/12/05	04/28/05	KWG0505827	
Benzo(a)pyrene	ND	U	0.20	0.016	1	04/12/05	04/28/05	KWG0505827	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	04/12/05	04/28/05	KWG0505827	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	04/12/05	04/28/05	KWG0505827	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	04/12/05	04/28/05	KWG0505827	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	97	36-134	04/28/05	Acceptable
Nitrobenzene-d5	99	47-128	04/28/05	Acceptable
2-Fluorobiphenyl	89	41-117	04/28/05	Acceptable
Terphenyl-d14	99	32-155	04/28/05	Acceptable

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	04/07/2005
Sample Matrix:	Water	**Date Received:**	04/08/2005

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-040705-4	**Units:**	ug/L
Lab Code:	K2502588-004	**Basis:**	NA

† Analyte	Comments
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0505827-3	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.50	0.051	1	04/12/05	04/26/05	KWG0505827	
Naphthalene	ND	U	0.20	0.012	1	04/12/05	04/26/05	KWG0505827	
2-Methylnaphthalene	ND	U	0.20	0.012	1	04/12/05	04/26/05	KWG0505827	
Acenaphthylene	ND	U	0.20	0.011	1	04/12/05	04/26/05	KWG0505827	
Acenaphthene	ND	U	0.20	0.0088	1	04/12/05	04/26/05	KWG0505827	
Dibenzofuran	ND	U	0.20	0.014	1	04/12/05	04/26/05	KWG0505827	
Fluorene	ND	U	0.20	0.012	1	04/12/05	04/26/05	KWG0505827	
Phenanthrene	ND	U	0.20	0.011	1	04/12/05	04/26/05	KWG0505827	
Anthracene	ND	U	0.20	0.015	1	04/12/05	04/26/05	KWG0505827	
Fluoranthene	ND	U	0.20	0.013	1	04/12/05	04/26/05	KWG0505827	
Pyrene	ND	U	0.20	0.015	1	04/12/05	04/26/05	KWG0505827	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	04/12/05	04/26/05	KWG0505827	
Benz(a)anthracene	ND	U	0.20	0.012	1	04/12/05	04/26/05	KWG0505827	
Chrysene	ND	U	0.20	0.014	1	04/12/05	04/26/05	KWG0505827	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	04/12/05	04/26/05	KWG0505827	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	04/12/05	04/26/05	KWG0505827	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	04/12/05	04/26/05	KWG0505827	
Benzo(a)pyrene	ND	U	0.20	0.016	1	04/12/05	04/26/05	KWG0505827	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	04/12/05	04/26/05	KWG0505827	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	04/12/05	04/26/05	KWG0505827	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	04/12/05	04/26/05	KWG0505827	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	102	36-134	04/26/05	Acceptable
Nitrobenzene-d5	103	47-128	04/26/05	Acceptable
2-Fluorobiphenyl	97	41-117	04/26/05	Acceptable
Terphenyl-d14	134	32-155	04/26/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0505827-3	**Basis:**	NA

† Analyte Comments	
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2502588
Project:	McCall Oil Portland (PDX)/021062-02		
Sample Matrix:	Water		

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	PERCENT
Analysis Method:	8270C	**Level:**	Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
MO-040705-1	K2502588-001	98	98	92	110
MO-040705-2	K2502588-002	85	83	87	93
MO-040705-3	K2502588-003	97	96	94	100
MO-040705-4	K2502588-004	97	99	89	99
Method Blank	KWG0505827-3	102	103	97	134
Lab Control Sample	KWG0505827-1	104	101	96	124
Duplicate Lab Control Sample	KWG0505827-2	105	103	96	124

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	36-134
Sur2 = Nitrobenzene-d5	47-128
Sur3 = 2-Fluorobiphenyl	41-117
Sur4 = Terphenyl-d14	32-155

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: McCall Oil Portland (PDX)/021062-02
Sample Matrix: Water

Service Request: K2502588
Date Extracted: 04/12/2005
Date Analyzed: 04/26/2005

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0505827

	Lab Control Sample KWG0505827-1 Lab Control Spike			Duplicate Lab Control Sample KWG0505827-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
4-Methylphenol	4.84	5.00	97	4.80	5.00	96	42-123	1	30
Naphthalene	3.71	5.00	74	3.86	5.00	77	10-150	4	30
2-Methylnaphthalene	3.40	5.00	68	3.41	5.00	68	10-143	0	30
Acenaphthylene	4.81	5.00	96	4.81	5.00	96	20-159	0	30
Acenaphthene	4.31	5.00	86	4.27	5.00	85	12-153	1	30
Dibenzofuran	4.27	5.00	85	4.21	5.00	84	21-145	1	30
Fluorene	4.31	5.00	86	4.26	5.00	85	24-150	1	30
Phenanthrene	4.50	5.00	90	4.32	5.00	86	23-144	4	30
Anthracene	4.21	5.00	84	4.19	5.00	84	22-148	1	30
Fluoranthene	4.80	5.00	96	4.75	5.00	95	28-154	1	30
Pyrene	4.60	5.00	92	4.56	5.00	91	20-150	1	30
Butyl Benzyl Phthalate	4.84	5.00	97	4.86	5.00	97	49-144	0	30
Benz(a)anthracene	4.39	5.00	88	4.49	5.00	90	10-182	2	30
Chrysene	4.69	5.00	94	4.70	5.00	94	15-177	0	30
Di-n-octyl Phthalate	4.79	5.00	96	4.64	5.00	93	55-143	3	30
Benzo(b)fluoranthene	4.43	5.00	89	4.37	5.00	87	11-175	1	30
Benzo(k)fluoranthene	4.86	5.00	97	4.76	5.00	95	10-183	2	30
Benzo(a)pyrene	4.45	5.00	89	4.36	5.00	87	10-182	2	30
Indeno(1,2,3-cd)pyrene	4.63	5.00	93	4.55	5.00	91	16-176	2	30
Dibenz(a,h)anthracene	4.66	5.00	93	4.52	5.00	90	10-186	3	30
Benzo(g,h,i)perylene	4.66	5.00	93	4.57	5.00	91	21-168	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

April 15, 2005
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: First Quarter 2005 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the first quarter 2005, and work planned for the second quarter 2005 for the McCall Oil and Chemical site in Portland, Oregon.

WORK COMPLETED FIRST QUARTER 2005

- data management and reporting
- met with DEQ on March 28, 2005 to discuss the status of the remedial investigation and source control evaluation
- project management and meetings

PLANNED SECOND QUARTER 2005 RI TASKS

- data management and reporting
- respond to DEQ's February 22, 2005 comment letter (completed on April 5, 2005)
- collect storm water samples from the four locations identified in the RI workplan
- project management and meetings

RESULTS

No new data was generated during first quarter 2005.

PROBLEMS ENCOUNTERED

No problems were encountered during first quarter 2005.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

January 14, 2005
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the fourth quarter 2004, and work planned for the first quarter 2005 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED, FOURTH QUARTER 2004

- data management and reporting
- measured water levels in all monitoring wells and at the Willamette River gauge
- sampled monitoring wells in accordance with sampling plan approved by DEQ in the letter dated November 13, 2003
- collected sediment sample from catch basin location S-3 on November 4, 2004
- Met with DEQ manager Tom Gainer for a site walk on November 5, 2004
- project management and meetings

PLANNED FIRST QUARTER 2005 RI TASKS

- data management and reporting
- project management and meetings

RESULTS

On October 20, 2004, groundwater elevations were measured in 20 monitoring wells and the Willamette River staff gauge. The water levels, converted to mean sea level, are plotted on Figure 2. Eighteen samples were collected on October 21-22, 2004 from 16 monitoring wells. On November 4, 2004, a sediment sample was collected from catch basin S-3. Copies of the field sampling data sheets are in Attachment A. The samples were submitted for analysis in accordance with the sampling plan (Table 1). The laboratory report and chain of custody documentation are in Attachment B. Review of the sampling and laboratory records revealed that the data were judged to be acceptable for their intended use. Please refer to the data validation review in Attachment C.

The field and laboratory data are presented in Tables 2 through 9 as follows.

Table 2	Monitoring Well and River Hydrology Measurements
Table 3	Total Petroleum Hydrocarbons - Groundwater
Table 4	PAHs and SVOCs - Groundwater
Table 5	Volatile Organic Compounds - Groundwater
Table 6	Metals – Groundwater
Table 7	Total Petroleum Hydrocarbons – Catch Basin Sediment
Table 8	PAHs and SVOCs - Catch Basin Sediment
Table 9	Metals - Catch Basin Sediment

PROBLEMS ENCOUNTERED

No problems were encountered during fourth quarter 2004.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.

Cc: Ted McCall; McCall Oil and Chemical

TABLES

Table 1
Sampling Plan
McCall Oil and Chemical

Well	Chlorinated VOCs	PAHs	Total Petroleum Hydrocarbons	As (Total and Dissolved)	Cr, Cu (Total and Dissolved)
EX-1	X		X	X	
EX-2		X	X	X	
EX-3		X	X	X	
EX-4 (MW-2)	X		X	X	
EX-7			X	X	
MW-1	X		X	X	X
MW-3	X		X	X	X
MW-5	X	X	X	X	
MW-6	X		X	X	
MW-7	X	X	X	X	X
MW-8	X	X	X	X	X
MW-9			X	X	
MW-10	X		X	X	
MW-12			X	X	
MW-14	X	X	X	X	X
MW-15	X	X	X	X	

Note: Samples will be collected semiannually

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
EX-1	10085.543	4249.628	36.12	09/08/94	15.35	20.77
EX-1	10085.543	4249.628	36.12	12/29/94	14.60	21.52
EX-1	10085.543	4249.628	36.12	03/29/95	13.06	23.06
EX-1	10085.543	4249.628	36.12	06/27/95	13.65	22.47
EX-1	10085.543	4249.628	36.12	07/14/95	13.82	22.30
EX-1	10085.543	4249.628	36.12	05/01/97	12.71	23.41
EX-1	10085.543	4249.628	36.12	02/03/99	13.21	22.91
EX-1	10085.543	4249.628	36.12	12/08/00	15.65	20.47
EX-1	10085.543	4249.628	36.12	01/19/01	15.46	20.66
EX-1	10085.543	4249.628	36.12	02/08/01	15.55	20.57
EX-1	10085.543	4249.628	36.12	03/08/01	15.65	20.47
EX-1	10085.543	4249.628	36.12	04/12/01	15.72	20.40
EX-1	10085.543	4249.628	36.12	05/15/01	15.68	20.44
EX-1	10085.543	4249.628	36.12	06/12/01	15.75	20.37
EX-1	10085.543	4249.628	36.12	07/16/01	15.84	20.28
EX-1	10085.543	4249.628	36.12	08/14/01	15.97	20.15
EX-1	10085.543	4249.628	36.12	09/13/01	16.07	20.05
EX-1	10085.543	4249.628	36.12	10/25/01	16.31	19.81
EX-1	10085.543	4249.628	36.12	11/16/01	16.27	19.85
EX-1	10085.543	4249.628	36.12	12/18/01	15.88	20.24
EX-1	10085.543	4249.628	36.12	01/22/02	15.05	21.07
EX-1	10085.543	4249.628	36.12	02/14/02	14.56	21.56
EX-1	10085.543	4249.628	36.12	03/06/02	14.28	21.84
EX-1	10085.543	4249.628	36.12	10/02/02	15.39	20.73
EX-1	10085.543	4249.628	36.12	02/11/04	13.74	22.38
EX-1	10085.543	4249.628	36.12	10/20/04	15.13	20.99
EX-2	10558.448	4883.507	32.28	09/08/94	18.56	13.72
EX-2	10558.448	4883.507	32.28	12/29/94	17.87	14.41
EX-2	10558.448	4883.507	32.28	03/29/95	17.11	15.17
EX-2	10558.448	4883.507	32.28	06/27/95	17.27	15.01
EX-2	10558.448	4883.507	32.28	07/14/95	17.42	14.86
EX-2	10558.448	4883.507	32.28	05/01/97	13.08	19.20
EX-2	10558.448	4883.507	32.28	02/03/99	16.30	15.98
EX-2	10558.448	4883.507	32.28	12/08/00	18.66	13.62
EX-2	10558.448	4883.507	32.28	01/19/01	18.67	13.61
EX-2	10558.448	4883.507	32.28	02/08/01	18.70	13.58
EX-2	10558.448	4883.507	32.28	03/08/01	18.76	13.52
EX-2	10558.448	4883.507	32.28	04/12/01	18.10	14.18
EX-2	10558.448	4883.507	32.28	05/15/01	17.94	14.34
EX-2	10558.448	4883.507	32.28	06/12/01	17.94	14.34
EX-2	10558.448	4883.507	32.28	07/16/01	18.49	13.79
EX-2	10558.448	4883.507	32.28	08/14/01	18.73	13.55
EX-2	10558.448	4883.507	32.28	09/13/01	18.90	13.38
EX-2	10558.448	4883.507	32.28	10/25/01	19.18	13.10
EX-2	10558.448	4883.507	32.28	11/16/01	19.24	13.04
EX-2	10558.448	4883.507	32.28	12/18/01	18.50	13.78
EX-2	10558.448	4883.507	32.28	01/22/02	17.83	14.45
EX-2	10558.448	4883.507	32.28	02/14/02	17.49	14.79
EX-2	10558.448	4883.507	32.28	03/06/02	17.45	14.83
EX-2	10558.448	4883.507	32.28	10/02/02	18.22	14.06
EX-2	10558.448	4883.507	32.28	02/11/04	17.54	14.74
EX-2	10558.448	4883.507	32.28	10/20/04	18.48	13.80
EX-3	10884.027	4568.183	32.07	09/08/94	17.96	14.11
EX-3	10884.027	4568.183	32.07	12/29/94	16.72	15.35
EX-3	10884.027	4568.183	32.07	03/29/95	15.43	16.64
EX-3	10884.027	4568.183	32.07	06/27/95	15.91	16.16
EX-3	10884.027	4568.183	32.07	07/14/95	15.96	16.11
EX-3	10884.027	4568.183	32.07	05/01/97	12.84	19.23
EX-3	10884.027	4568.183	32.07	02/03/99	15.12	16.95

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
EX-3	10884.027	4568.183	32.07	12/08/00	18.27	13.80
EX-3	10884.027	4568.183	32.07	01/19/01	18.13	13.94
EX-3	10884.027	4568.183	32.07	02/08/01	18.10	13.97
EX-3	10884.027	4568.183	32.07	03/08/01	18.17	13.90
EX-3	10884.027	4568.183	32.07	04/12/01	17.44	14.63
EX-3	10884.027	4568.183	32.07	05/15/01	17.08	14.99
EX-3	10884.027	4568.183	32.07	06/12/01	17.04	15.03
EX-3	10884.027	4568.183	32.07	07/16/01	17.82	14.25
EX-3	10884.027	4568.183	32.07	08/14/01	18.25	13.82
EX-3	10884.027	4568.183	32.07	09/13/01	18.51	13.56
EX-3	10884.027	4568.183	32.07	10/25/01	18.92	13.15
EX-3	10884.027	4568.183	32.07	11/16/01	19.02	13.05
EX-3	10884.027	4568.183	32.07	12/18/01	17.91	14.16
EX-3	10884.027	4568.183	32.07	01/22/02	16.41	15.66
EX-3	10884.027	4568.183	32.07	02/14/02	15.95	16.12
EX-3	10884.027	4568.183	32.07	03/06/02	15.88	16.19
EX-3	10884.027	4568.183	32.07	10/02/02	17.59	14.48
EX-3	10884.027	4568.183	32.07	02/11/04	15.99	16.08
EX-3	10884.027	4568.183	32.07	10/20/04	18.11	13.96
EX-4 (MW-2)	10459.152	3767.039	35.60	10/18/93	16.63	18.97
EX-4 (MW-2)	10459.152	3767.039	35.60	10/28/93	16.72	18.88
EX-4 (MW-2)	10459.152	3767.039	35.60	01/27/94	16.56	19.04
EX-4 (MW-2)	10459.152	3767.039	35.60	09/08/94	16.86	18.74
EX-4 (MW-2)	10459.152	3767.039	35.60	12/29/94	16.09	19.51
EX-4 (MW-2)	10459.152	3767.039	35.60	03/29/95	14.63	20.97
EX-4 (MW-2)	10459.152	3767.039	35.60	06/27/95	15.22	20.38
EX-4 (MW-2)	10459.152	3767.039	35.60	07/14/95	15.41	20.19
EX-4 (MW-2)	10459.152	3767.039	35.60	05/01/97	14.08	21.52
EX-4 (MW-2)	10459.152	3767.039	35.60	02/03/99	14.58	21.02
EX-4 (MW-2)	10459.152	3767.039	35.60	12/08/00	16.97	18.63
EX-4 (MW-2)	10459.152	3767.039	35.60	01/19/01	16.81	18.79
EX-4 (MW-2)	10459.152	3767.039	35.60	02/08/01	16.84	18.76
EX-4 (MW-2)	10459.152	3767.039	35.60	03/08/01	16.92	18.68
EX-4 (MW-2)	10459.152	3767.039	35.60	04/12/01	16.96	18.64
EX-4 (MW-2)	10459.152	3767.039	35.60	05/15/01	16.92	18.68
EX-4 (MW-2)	10459.152	3767.039	35.60	06/12/01	16.98	18.62
EX-4 (MW-2)	10459.152	3767.039	35.60	07/16/01	17.09	18.51
EX-4 (MW-2)	10459.152	3767.039	35.60	08/14/01	17.22	18.38
EX-4 (MW-2)	10459.152	3767.039	35.60	09/13/01	17.30	18.30
EX-4 (MW-2)	10459.152	3767.039	35.60	10/25/01	17.51	18.09
EX-4 (MW-2)	10459.152	3767.039	35.60	11/16/01	17.52	18.08
EX-4 (MW-2)	10459.152	3767.039	35.60	12/18/01	17.22	18.38
EX-4 (MW-2)	10459.152	3767.039	35.60	01/22/02	16.28	19.32
EX-4 (MW-2)	10459.152	3767.039	35.60	02/14/02	15.80	19.80
EX-4 (MW-2)	10459.152	3767.039	35.60	03/06/02	15.61	19.99
EX-4 (MW-2)	10459.152	3767.039	35.60	10/02/02	16.49	19.11
EX-4 (MW-2)	10459.152	3767.039	35.60	02/11/04	15.14	20.46
EX-4 (MW-2)	10459.152	3767.039	35.60	10/20/04	16.55	19.05
EX-5	10932.866	4201.793	31.87	09/08/94	NM	
EX-5	10932.866	4201.793	31.87	12/29/94	15.85	16.02
EX-5	10932.866	4201.793	31.87	03/29/95	14.84	17.03
EX-5	10932.866	4201.793	31.87	06/27/95	16.32	15.55
EX-5	10932.866	4201.793	31.87	07/14/95	16.34	15.53
EX-5	10932.866	4201.793	31.87	05/01/97	12.06	19.81
EX-5	10932.866	4201.793	31.87	02/03/99	13.45	18.42
EX-5	10932.866	4201.793	31.87	12/08/00	19.72	12.15
EX-5	10932.866	4201.793	31.87	01/19/01	18.87	13.00
EX-5	10932.866	4201.793	31.87	02/08/01	18.98	12.89
EX-5	10932.866	4201.793	31.87	03/08/01	19.22	12.65

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
EX-5	10932.866	4201.793	31.87	04/12/01	18.96	12.91
EX-5	10932.866	4201.793	31.87	05/15/01	18.94	12.93
EX-5	10932.866	4201.793	31.87	06/12/01	19.05	12.82
EX-5	10932.866	4201.793	31.87	07/16/01	19.76	12.11
EX-5	10932.866	4201.793	31.87	08/14/01	20.32	11.55
EX-5	10932.866	4201.793	31.87	09/13/01	20.70	11.17
EX-5	10932.866	4201.793	31.87	10/25/01	21.27	10.60
EX-5	10932.866	4201.793	31.87	11/16/01	21.04	10.83
EX-5	10932.866	4201.793	31.87	12/18/01	16.64	15.23
EX-5	10932.866	4201.793	31.87	01/22/02	16.10	15.77
EX-5	10932.866	4201.793	31.87	02/14/02	15.35	16.52
EX-5	10932.866	4201.793	31.87	03/06/02	15.93	15.94
EX-5	10932.866	4201.793	31.87	10/02/02	19.58	12.29
EX-5	10932.866	4201.793	31.87	02/11/04	15.70	16.17
EX-5	10932.866	4201.793	31.87	10/20/04	20.17	11.70
EX-6	10295.278	4299.654	34.38	09/08/94	NM	
EX-6	10295.278	4299.654	34.38	12/29/94	13.98	20.40
EX-6	10295.278	4299.654	34.38	03/29/95	12.51	21.87
EX-6	10295.278	4299.654	34.38	06/27/95	13.04	21.34
EX-6	10295.278	4299.654	34.38	07/14/95	13.17	21.21
EX-6	10295.278	4299.654	34.38	05/01/97	11.93	22.45
EX-6	10295.278	4299.654	34.38	02/03/99	12.71	21.67
EX-6	10295.278	4299.654	34.38	12/08/00	Well casing filled with silt	
EX-6	10295.278	4299.654	34.38	11/16/01	Decommissioned	
EX-7	9860.733	4158.265	35.29	09/08/94	NM	
EX-7	9860.733	4158.265	35.29	12/29/94	13.21	22.08
EX-7	9860.733	4158.265	35.29	03/29/95	11.69	23.60
EX-7	9860.733	4158.265	35.29	06/27/95	12.34	22.95
EX-7	9860.733	4158.265	35.29	07/14/95	12.38	22.91
EX-7	9860.733	4158.265	35.29	05/01/97	11.44	23.85
EX-7	9860.733	4158.265	35.29	02/03/99	11.81	23.48
EX-7	9860.733	4158.265	35.29	12/08/00	14.32	20.97
EX-7	9860.733	4158.265	35.29	01/19/01	14.15	21.14
EX-7	9860.733	4158.265	35.29	02/08/01	14.18	21.11
EX-7	9860.733	4158.265	35.29	03/08/01	14.30	20.99
EX-7	9860.733	4158.265	35.29	04/12/01	14.37	20.92
EX-7	9860.733	4158.265	35.29	05/15/01	14.33	20.96
EX-7	9860.733	4158.265	35.29	06/12/01	14.41	20.88
EX-7	9860.733	4158.265	35.29	07/16/01	14.51	20.78
EX-7	9860.733	4158.265	35.29	08/14/01	14.65	20.64
EX-7	9860.733	4158.265	35.29	09/13/01	14.75	20.54
EX-7	9860.733	4158.265	35.29	10/25/01	15.01	20.28
EX-7	9860.733	4158.265	35.29	11/16/01	14.98	20.31
EX-7	9860.733	4158.265	35.29	12/18/01	14.42	20.87
EX-7	9860.733	4158.265	35.29	01/22/02	13.50	21.79
EX-7	9860.733	4158.265	35.29	02/14/02	13.15	22.14
EX-7	9860.733	4158.265	35.29	03/06/02	12.86	22.43
EX-7	9860.733	4158.265	35.29	10/02/02	13.76	21.53
EX-7	9860.733	4158.265	35.29	02/11/04	12.31	22.98
EX-7	9860.733	4158.265	35.29	10/20/04	13.80	21.49
MW-1	10531.66	3883.202	35.48	05/11/93	15.56	19.92
MW-1	10531.66	3883.202	35.48	10/18/93	17.04	18.44
MW-1	10531.66	3883.202	35.48	10/28/93	17.16	18.32
MW-1	10531.66	3883.202	35.48	01/27/94	16.99	18.49
MW-1	10531.66	3883.202	35.48	09/08/94	NM	
MW-1	10531.66	3883.202	35.48	12/29/94	16.43	19.05
MW-1	10531.66	3883.202	35.48	03/29/95	NM	
MW-1	10531.66	3883.202	35.48	06/27/95	NM	

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
MW-1	10531.66	3883.202	35.48	07/14/95	NM	
MW-1	10531.66	3883.202	35.48	05/01/97	14.12	21.36
MW-1	10531.66	3883.202	35.48	02/03/99	14.83	20.65
MW-1	10531.66	3883.202	35.48	12/08/00	17.40	18.08
MW-1	10531.66	3883.202	35.48	01/19/01	17.23	18.25
MW-1	10531.66	3883.202	35.48	02/08/01	17.32	18.16
MW-1	10531.66	3883.202	35.48	03/08/01	17.42	18.06
MW-1	10531.66	3883.202	35.48	04/12/01	17.41	18.07
MW-1	10531.66	3883.202	35.48	05/15/01	17.37	18.11
MW-1	10531.66	3883.202	35.48	06/12/01	NM	
MW-1	10531.66	3883.202	35.48	07/16/01	17.59	17.89
MW-1	10531.66	3883.202	35.48	08/14/01	17.70	17.78
MW-1	10531.66	3883.202	35.48	09/13/01	17.78	17.70
MW-1	10531.66	3883.202	35.48	10/25/01	17.97	17.51
MW-1	10531.66	3883.202	35.48	11/16/01	17.88	17.60
MW-1	10531.66	3883.202	35.48	12/18/01	17.44	18.04
MW-1	10531.66	3883.202	35.48	01/22/02	16.68	18.80
MW-1	10531.66	3883.202	35.48	02/14/02	16.38	19.10
MW-1	10531.66	3883.202	35.48	03/06/02	16.03	19.45
MW-1	10531.66	3883.202	35.48	10/02/02	16.98	18.50
MW-1	10531.66	3883.202	35.48	02/11/04	15.63	19.85
MW-1	10531.66	3883.202	35.48	10/20/04	16.96	18.52
MW-3	10606.911	3812.937	34.56	10/18/93	16.47	18.09
MW-3	10606.911	3812.937	34.56	10/28/93	16.60	17.96
MW-3	10606.911	3812.937	34.56	01/27/94	16.40	18.16
MW-3	10606.911	3812.937	34.56	09/08/94	NM	
MW-3	10606.911	3812.937	34.56	12/29/94	15.90	18.66
MW-3	10606.911	3812.937	34.56	03/29/95	NM	
MW-3	10606.911	3812.937	34.56	06/27/95	NM	
MW-3	10606.911	3812.937	34.56	07/14/95	NM	
MW-3	10606.911	3812.937	34.56	05/01/97	13.73	20.83
MW-3	10606.911	3812.937	34.56	02/03/99	14.36	20.20
MW-3	10606.911	3812.937	34.56	12/08/00	16.73	17.83
MW-3	10606.911	3812.937	34.56	01/19/01	16.60	17.96
MW-3	10606.911	3812.937	34.56	02/08/01	16.64	17.92
MW-3	10606.911	3812.937	34.56	03/08/01	16.73	17.83
MW-3	10606.911	3812.937	34.56	04/12/01	16.73	17.83
MW-3	10606.911	3812.937	34.56	05/15/01	16.71	17.85
MW-3	10606.911	3812.937	34.56	06/12/01	16.76	17.80
MW-3	10606.911	3812.937	34.56	07/16/01	16.91	17.65
MW-3	10606.911	3812.937	34.56	08/14/01	16.97	17.59
MW-3	10606.911	3812.937	34.56	09/13/01	17.09	17.47
MW-3	10606.911	3812.937	34.56	10/25/01	17.24	17.32
MW-3	10606.911	3812.937	34.56	11/16/01	17.16	17.40
MW-3	10606.911	3812.937	34.56	12/18/01	16.82	17.74
MW-3	10606.911	3812.937	34.56	01/22/02	16.09	18.47
MW-3	10606.911	3812.937	34.56	02/14/02	15.65	18.91
MW-3	10606.911	3812.937	34.56	03/06/02	15.50	19.06
MW-3	10606.911	3812.937	34.56	10/02/02	16.36	18.20
MW-3	10606.911	3812.937	34.56	02/11/04	15.12	19.44
MW-3	10606.911	3812.937	34.56	10/20/04	16.43	18.13
MW-4	10694.292	3806.683	33.61	10/18/93	16.21	17.40
MW-4	10694.292	3806.683	33.61	10/28/93	16.26	17.35
MW-4	10694.292	3806.683	33.61	01/27/94	16.06	17.55
MW-4	10694.292	3806.683	33.61	09/08/94	NM	
MW-4	10694.292	3806.683	33.61	12/29/94	15.55	18.06
MW-4	10694.292	3806.683	33.61	03/29/95	NM	
MW-4	10694.292	3806.683	33.61	06/27/95	NM	
MW-4	10694.292	3806.683	33.61	07/14/95	NM	

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
MW-4	10694.292	3806.683	33.61	05/01/97	13.32	20.29
MW-4	10694.292	3806.683	33.61	02/03/99	14.04	19.57
MW-4	10694.292	3806.683	33.61	12/08/00	16.25	17.36
MW-4	10694.292	3806.683	33.61	01/19/01	16.17	17.44
MW-4	10694.292	3806.683	33.61	02/08/01	16.21	17.40
MW-4	10694.292	3806.683	33.61	03/08/01	16.29	17.32
MW-4	10694.292	3806.683	33.61	04/12/01	16.28	17.33
MW-4	10694.292	3806.683	33.61	05/15/01	16.28	17.33
MW-4	10694.292	3806.683	33.61	06/12/01	16.32	17.29
MW-4	10694.292	3806.683	33.61	07/16/01	16.43	17.18
MW-4	10694.292	3806.683	33.61	08/14/01	16.53	17.08
MW-4	10694.292	3806.683	33.61	09/13/01	16.60	17.01
MW-4	10694.292	3806.683	33.61	10/25/01	16.74	16.87
MW-4	10694.292	3806.683	33.61	11/16/01	16.63	16.98
MW-4	10694.292	3806.683	33.61	12/18/01	16.20	17.41
MW-4	10694.292	3806.683	33.61	01/22/02	15.65	17.96
MW-4	10694.292	3806.683	33.61	02/14/02	15.26	18.35
MW-4	10694.292	3806.683	33.61	03/06/02	15.18	18.43
MW-4	10694.292	3806.683	33.61	10/02/02	15.96	17.65
MW-4	10694.292	3806.683	33.61	02/11/04	14.76	18.85
MW-4	10694.292	3806.683	33.61	10/20/04	15.96	17.65
MW-5	10840.045	3669.241	34.66	10/18/93	20.13	14.53
MW-5	10840.045	3669.241	34.66	10/28/93	20.48	14.18
MW-5	10840.045	3669.241	34.66	01/27/94	19.89	14.77
MW-5	10840.045	3669.241	34.66	09/08/94	NM	
MW-5	10840.045	3669.241	34.66	12/29/94	19.25	15.41
MW-5	10840.045	3669.241	34.66	03/29/95	NM	
MW-5	10840.045	3669.241	34.66	06/27/95	NM	
MW-5	10840.045	3669.241	34.66	07/14/95	NM	
MW-5	10840.045	3669.241	34.66	05/01/97	15.91	18.75
MW-5	10840.045	3669.241	34.66	02/03/99	18.15	16.51
MW-5	10840.045	3669.241	34.66	12/08/00	19.80	14.86
MW-5	10840.045	3669.241	34.66	01/19/01	19.69	14.97
MW-5	10840.045	3669.241	34.66	02/08/01	19.67	14.99
MW-5	10840.045	3669.241	34.66	03/08/01	19.75	14.91
MW-5	10840.045	3669.241	34.66	04/12/01	19.80	14.86
MW-5	10840.045	3669.241	34.66	05/15/01	20.00	14.66
MW-5	10840.045	3669.241	34.66	06/12/01	20.01	14.65
MW-5	10840.045	3669.241	34.66	07/16/01	20.32	14.34
MW-5	10840.045	3669.241	34.66	08/14/01	20.39	14.27
MW-5	10840.045	3669.241	34.66	09/13/01	20.47	14.19
MW-5	10840.045	3669.241	34.66	10/25/01	20.30	14.36
MW-5	10840.045	3669.241	34.66	11/16/01	20.19	14.47
MW-5	10840.045	3669.241	34.66	12/18/01	19.18	15.48
MW-5	10840.045	3669.241	34.66	01/22/02	19.00	15.66
MW-5	10840.045	3669.241	34.66	02/14/02	18.79	15.87
MW-5	10840.045	3669.241	34.66	03/06/02	18.95	15.71
MW-5	10840.045	3669.241	34.66	10/02/02	20.25	14.41
MW-5	10840.045	3669.241	34.66	02/11/04	18.96	15.70
MW-5	10840.045	3669.241	34.66	10/20/04	20.50	14.16
MW-6	10441.876	4127.999	34.83	10/25/01	16.73	18.10
MW-6	10441.876	4127.999	34.83	11/16/01	16.67	18.16
MW-6	10441.876	4127.999	34.83	12/18/01	16.35	18.48
MW-6	10441.876	4127.999	34.83	01/22/02	15.46	19.37
MW-6	10441.876	4127.999	34.83	02/14/02	15.94	18.89
MW-6	10441.876	4127.999	34.83	03/06/02	14.73	20.10
MW-6	10441.876	4127.999	34.83	10/02/02	15.57	19.26
MW-6	10441.876	4127.999	34.83	02/11/04	14.17	20.66
MW-6	10441.876	4127.999	34.83	10/20/04	15.59	19.24

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
MW-7	10746.817	3975.831	34.74	10/25/01	25.77	8.97
MW-7	10746.817	3975.831	34.74	11/16/01	24.94	9.80
MW-7	10746.817	3975.831	34.74	12/18/01	21.26	13.48
MW-7	10746.817	3975.831	34.74	01/22/02	22.72	12.02
MW-7	10746.817	3975.831	34.74	02/14/02	22.61	12.13
MW-7	10746.817	3975.831	34.74	03/06/02	23.33	11.41
MW-7	10746.817	3975.831	34.74	10/02/02	25.08	9.66
MW-7	10746.817	3975.831	34.74	02/11/04	22.66	12.08
MW-7	10746.817	3975.831	34.74	10/20/04	24.40	10.34
MW-8	10850.356	4091.319	32.24	10/25/01	25.64	6.60
MW-8	10850.356	4091.319	32.24	11/16/01	23.85	8.39
MW-8	10850.356	4091.319	32.24	12/18/01	19.55	12.69
MW-8	10850.356	4091.319	32.24	01/22/02	22.44	9.80
MW-8	10850.356	4091.319	32.24	02/14/02	22.54	9.70
MW-8	10850.356	4091.319	32.24	03/06/02	23.52	8.72
MW-8	10850.356	4091.319	32.24	10/02/02	25.41	6.83
MW-8	10850.356	4091.319	32.24	02/11/04	21.64	10.60
MW-8	10850.356	4091.319	32.24	10/20/04	23.35	8.89
MW-9	10533.922	3573.223	36.00	01/22/02	17.57	18.43
MW-9	10533.922	3573.223	36.00	02/14/02	17.21	18.79
MW-9	10533.922	3573.223	36.00	03/06/02	17.02	18.98
MW-9	10533.922	3573.223	36.00	10/02/02	17.85	18.15
MW-9	10533.922	3573.223	36.00	02/11/04	16.63	19.37
MW-9	10533.922	3573.223	36.00	10/20/04	17.90	18.10
MW-10	10244.374	3856.751	35.06	01/22/02	14.97	20.09
MW-10	10244.374	3856.751	35.06	02/14/02	14.46	20.60
MW-10	10244.374	3856.751	35.06	03/06/02	14.20	20.86
MW-10	10244.374	3856.751	35.06	10/02/02	15.81	19.25
MW-10	10244.374	3856.751	35.06	02/11/04	13.64	21.42
MW-10	10244.374	3856.751	35.06	10/20/04	15.19	19.87
MW-11	9936.308	4506.014	34.41	01/22/02	13.32	21.09
MW-11	9936.308	4506.014	34.41	02/14/02	12.94	21.47
MW-11	9936.308	4506.014	34.41	03/06/02	12.76	21.65
MW-11	9936.308	4506.014	34.41	10/02/02	Free product, unable to measure	
MW-11	9936.308	4506.014	34.41	02/11/04	Free product, unable to measure	
MW-11	9936.308	4506.014	34.41	10/20/04	Free product, unable to measure	
MW-12	10224.87	4799.258	32.79	01/22/02	17.88	14.91
MW-12	10224.87	4799.258	32.79	02/14/02	17.46	15.33
MW-12	10224.87	4799.258	32.79	03/06/02	17.37	15.42
MW-12	10224.87	4799.258	32.79	10/02/02	17.65	15.14
MW-12	10224.87	4799.258	32.79	02/11/04	17.22	15.57
MW-12	10224.87	4799.258	32.79	10/20/04	17.97	14.82
MW-13	10534.855	4458.115	34.94	01/22/02	18.83	16.11
MW-13	10534.855	4458.115	34.94	02/14/02	17.95	16.99
MW-13	10534.855	4458.115	34.94	03/06/02	17.57	17.37
MW-13	10534.855	4458.115	34.94	10/02/02	18.80	16.14
MW-13	10534.855	4458.115	34.94	02/11/04	18.17	16.77
MW-13	10534.855	4458.115	34.94	10/20/04	19.31	15.63
MW-14	10795.996	3837.191	40.17	02/11/04	22.57	17.60
MW-14	10795.996	3837.191	40.17	10/20/04	23.54	16.63
MW-15	10006.311	4517.743	33.56	02/11/04	11.23	22.33
MW-15	10006.311	4517.743	33.56	10/20/04	12.47	21.09

Table 2

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Northing (lacal plane)	Easting (local Plane)	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
WG-1	11177	4800	37.28	10/28/93	32.82	4.46
WG-1	11177	4800	37.28	01/27/94	30.04	7.24
WG-1	11177	4800	37.28	09/08/94	NM	
WG-1	11177	4800	37.28	12/29/94	NM	
WG-1	11177	4800	37.28	03/29/95	NM	
WG-1	11177	4800	37.28	06/27/95	NM	
WG-1	11177	4800	37.28	07/14/95	NM	
WG-1	11177	4800	37.28	05/01/97	17.80	19.48
WG-1	11177	4800	37.28	02/03/99	23.02	14.26
WG-1	11177	4800	37.28	12/08/00	31.60	5.68
WG-1	11177	4800	37.28	01/19/01	31.74	5.54
WG-1	11177	4800	37.28	02/08/01	30.78	6.50
WG-1	11177	4800	37.28	03/08/01	31.80	5.48
WG-1	11177	4800	37.28	04/12/01	29.15	8.13
WG-1	11177	4800	37.28	05/15/01	29.95	7.33
WG-1	11177	4800	37.28	06/12/01	31.02	6.26
WG-1	11177	4800	37.28	07/16/01	34.23	3.05
WG-1	11177	4800	37.28	08/14/01	33.27	4.01
WG-1	11177	4800	37.28	09/13/01	31.15	6.13
WG-1	11177	4800	37.28	10/25/01	31.38	5.90
WG-1	11177	4800	37.28	11/16/01	30.77	6.51
WG-1	11177	4800	37.28	12/18/01	25.45	11.83
WG-1	11177	4800	37.28	01/22/02	27.80	9.48
WG-1	11177	4800	37.28	02/14/02	29.27	8.01
WG-1	11177	4800	37.28	03/06/02	29.46	7.82
WG-1	11177	4800	37.28	10/02/02	32.60	4.68
WG-1	11177	4800	37.28	02/11/04	28.65	8.63
WG-1	11177	4800	37.28	10/20/04	29.33	7.95

Note: Reference point elevations for EX-1 to EX-7, MW-1 to MW-5 and WG-1 surveyed by W&H Pacific on 9/19/00.
MW-6 to MW-13 surveyed by W&H Pacific on 1/30/02. MW-14 and MW-15 surveyed by W&H Pacific on 4/5/04.

Table 3
Total Petroleum Hydrocarbons
Groundwater
McCall Oil and Chemical

Location	Date Sampled	Gasoline		Diesel		Heavy Fuel Oil	
Monitoring Wells - Water µg/L (ppb)							
EX-1	09/08/94	50	U	50	U	**266**	
EX-1 Duplicate	09/08/94	5	U				
EX-1	12/30/94	50	U	50	U	**632**	
EX-1	03/29/95	50	U	50	U	**454**	
EX-1	07/14/95	50	U	50	U	200	U
EX-1	05/02/97	**167**	Y	50	U	200	U
EX-1 Duplicate	05/02/97	**188**	Y	50	U	200	U
EX-1	02/04/99	100	U	100	U	**924**	
EX-1 Duplicate	02/04/99	100	U	100	U	**814**	
EX-1	12/20/00	**990**	Z	100	U	250	U
EX-1	03/07/02	**460**	H	**280**	Y	**550**	O
EX-1	10/03/02	100	U	100	U	250	U
EX-1	02/11/04	**500**	Z	**120**	Y	250	U
EX-1 Duplicate	02/11/04	**450**	Z	**120**	Y	250	U
EX-1	10/22/04	**210**	Z	**110**	H	250	U
EX-2	09/08/94	50	U	50	U	**200**	
EX-2	12/30/94	50	U	50	U	**441**	
EX-2	03/29/95	50	U	50	U	**398**	
EX-2	07/14/95	50	U	50	U	**885**	
EX-2	05/01/97	50	U	**519**	Y	200	U
EX-2	02/04/99	10	U	10	U	**569**	
EX-2	12/20/00	100	U	100	U	250	U
EX-2	03/07/02	110	U	**170**	Y	270	U
EX-2	10/04/02	100	U	**270**	Y	**290**	O
EX-2	02/12/04	100	U	**110**	Y	250	U
EX-2	10/21/04	100	U	**160**	Y	250	U
EX-3	09/08/94	50	U	50	U	**200**	
EX-3 Duplicate	09/08/94	50	U	50	U	**200**	
EX-3	12/30/94	50	U	50	U	**474**	
EX-3	03/29/95	50	U	50	U	**226**	
EX-3	07/14/95	50	U	50	U	200	U
EX-3	05/01/97	50	U	**64**	Y	200	U
EX-3	02/04/99	100	U	100	U	**564**	
EX-3	12/20/00	**690**	Z	100	U	250	U
EX-3	03/07/02	110	U	**110**	Y	270	U
EX-3	10/04/02	100	U	**120**	Y	250	U
EX-3	02/12/04	100	U	100	U	250	U
EX-3	10/21/04	100	U	100	U	250	U

Table 3
Total Petroleum Hydrocarbons
Groundwater
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
EX-4/MW-2	09/08/94	50	U	50	U	200	
EX-4/MW-2	12/30/94	50	U	1000	U	3840	
EX-4/MW-2	03/29/95	50	U	2140		200	U
EX-4/MW-2	07/14/95	50	U	343		200	U
EX-4/MW-2 Duplicate	07/14/95	50	U	50	U	200	U
EX-4/MW-2	05/01/97	50	U	1310	Y	200	U
EX-4/MW-2	02/03/99	100	U	787	Y	250	U
EX-4/MW-2	12/20/00	640	Z	100	U	250	U
EX-4/MW-2	03/07/02	160	H	920	Y	290	O
EX-4/MW-2	10/03/02	150	H	980	Y	250	U
EX-4/MW-2	02/13/04	120	H	920	Y	280	O
EX-4/MW-2	10/22/04	240	H	1700	Y	610	L
EX-5	12/30/94	50	U	50	U	1400	
EX-5	03/29/95	50	U	50	U	639	
EX-5 Duplicate	03/29/95	50	U	50	U	767	
EX-5	07/14/95	50	U	1500		200	U
EX-5	05/01/97	50	U	50	U	200	U
EX-5 Duplicate	05/01/97	50	U	50	U	200	U
EX-5	02/04/99	100	U	573	Y	250	U
EX-5 Duplicate	02/04/99	100	U	550	Y	250	U
EX-5	12/20/00	950	Z	100	U	250	U
EX-5	03/07/02	100	U	140	Y	250	U
EX-5	10/04/02	100	U	120	Y	270	O
EX-6	12/30/94	50	U	50	U	842	
EX-6 Duplicate	12/30/94	50	U	50	U	851	
EX-6	03/29/95	50	U	50	U	1160	
EX-6	07/14/95	50	U	50	U	200	U
EX-6	05/02/97	50	U	50	U	1450	
EX-6	02/04/99	100	U	1280	Y	250	U
EX-7	12/30/94	50	U	50	U	200	U
EX-7	03/29/95	50	U	50	U	200	U
EX-7	07/14/95	50	U	50	U	200	U
EX-7	05/02/97	50	U	50	U	200	U
EX-7	02/03/99	100	U	250	U	250	U
EX-7	12/20/00	530	Z	100	U	250	U
EX-7	03/06/02	100	U	100	U	250	U
EX-7	10/03/02	100	U	100	U	250	U
EX-7	02/13/04	100	U	100	U	250	U
EX-7	10/21/04	100	U	100	U	250	U
EX-7 Duplicate	10/21/04	100	U	100	U	270	O

Table 3
Total Petroleum Hydrocarbons
Groundwater
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
MW-1	05/01/97	50	U	319	Y	200	U
MW-1	02/03/99	100	U	250	U	250	U
MW-1	12/20/00	1200	Z	100	U	250	U
MW-1	03/07/02	100	U	110	Y	250	U
MW-1	10/03/02	100	U	220	Y	250	U
MW-1	02/11/04	100	U	120	Y	250	U
MW-1	10/22/04	100	U	300	Y	320	L
MW-1 Duplicate	10/22/04	100	U	270	Y	320	L
MW-3	05/01/97	50	U	1430	Y	200	U
MW-3	02/03/99	100	U	1190	Y	250	U
MW-3	12/20/00	720	Z	100	U	250	U
MW-3 Duplicate	03/07/02	240	H	1000	Y	390	O
MW-3	03/07/02	220	H	1000	Y	410	O
MW-3	10/03/02	320	H	3000	Y	520	L
MW-3	02/11/04	300	H	2000	Y	250	U
MW-3	10/22/04	150	H	2400	Y	540	L
MW-4	05/01/97	50	U	312	Y	200	U
MW-4	02/03/99	100	U	716	Y	250	U
MW-4	12/20/00	100	U	100	U	250	U
MW-4	03/07/02	180	H	870	Y	350	O
MW-4	10/03/02	170	H	1200	Y	250	U
MW-5	05/01/97	50	U	204	Y	200	U
MW-5	02/03/99	100	U	391	Y	250	U
MW-5	12/20/00	100	U	100	U	250	U
MW-5	03/07/02	100	U	310	Y	260	O
MW-5	10/03/02	100	U	280	Y	250	U
MW-5 Duplicate	10/03/02	100	U	310	Y	250	U
MW-5	02/11/04	100	U	290	Y	250	U
MW-5	10/22/04	100	U	540	Y	330	L
MW-6	10/25/01	250	U	630	U	630	U
MW-6 Duplicate	10/25/01	250	U	630	U	630	U
MW-6	03/08/02	160	Z	240	Y	500	O
MW-6	10/03/02	100	U	280	Y	350	L
MW-6 Duplicate	10/03/02	100	U	230	Y	270	L
MW-6	02/12/04	100	U	130	Y	250	U
MW-6	10/21/04	100	U	210	Y	250	U
MW-7	10/25/01	250	U	630	U	630	U
MW-7	03/08/02	110	U	1500	Y	4000	O
MW-7	10/04/02	160	H	1100	Y	820	O
MW-7	02/12/04	100	U	240	Y	250	U
MW-7 Duplictate	02/12/04	100	U	240	Y	250	U
MW-7	10/21/04	100	U	430	Y	250	U

Table 3
Total Petroleum Hydrocarbons
Groundwater
McCall Oil and Chemical

Location	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
MW-8	10/25/01	250	U	3090		1840	
MW-8	03/07/02	650	H	20000	Y	9200	O
MW-8	10/04/02	1100	H	35000	DY	23000	DO
MW-8	02/12/04	100	U	330	Y	250	U
MW-8	10/21/04	100	U	1300	Y	830	O
MW-9	01/22/02	140	H	480	Y	310	O
MW-9	03/06/02	200	H	520	Y	300	U
MW-9 Duplicate	03/06/02	210	H	600	Y	290	U
MW-9	10/03/02	150	H	850	Y	250	U
MW-9	02/13/04	100	U	300	Y	250	U
MW-9	10/22/04	130	H	1100	Y	510	L
MW-10	01/22/02	100	U	250	Y	510	O
MW-10	03/06/02	110	U	170	Y	320	O
MW-10	10/03/02	100	U	170	Y	250	U
MW-10	02/13/04	100	U	370	Y	250	U
MW-10	10/21/04	100	U	650	Y	310	L
MW-11	01/22/02	1900	H	15000	Y	4300	O
MW-11	03/08/02	1700	H	11000	Y	2600	O
MW-12	01/22/02	110	H	630	Y	1000	O
MW-12	03/06/02	150	H	1100	Y	1900	O
MW-12	10/04/02	100	U	570	Y	660	O
MW-12	02/13/04	100	U	340	Y	250	U
MW-12	10/21/04	100	U	360	Y	410	O
MW-13	01/22/02	300	H	1000	Y	2300	O
MW-13 Duplicate	01/22/02	360	H	1300	Y	2900	O
MW-13	03/06/02	150	H	710	Y	1500	O
MW-13	10/04/02	150	Z	650	Y	1300	O
MW-14	02/12/04	100	U	300	Y	250	U
MW-14	10/21/04	100	U	430	Y	280	L
MW-15	02/12/04	100	U	100	U	250	U
MW-15	10/22/04	100	U	110	H	250	U

Notes: U = Not detected at method reporting limit. F = Fingerprint of the sample matches the elution pattern of calibration standard
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.
Z = The fingerprint does not resemble a petroleum product.
DET= Detected above method reporting limit (method reporting limit shown)
D = The reported result is from a dilution.

TABLE 4
PAHs and SVOCs (µg/L)
Groundwater
McCall Oil and Chemical

Sample Designation	EX-1	EX-1	EX-1	EX-2	EX-2	EX-2	EX-2	EX-2	EX-3	EX-3	EX-3	EX-3	EX-3	EX-4/MW-2	EX-4/MW-2	EX-4/MW-2	EX-5	EX-5	EX-5
	Groundwater																		
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	10/04/02	02/12/04	10/21/04	12/20/00	03/07/02	10/04/02	02/12/04	10/21/04	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	10/04/02
LPAHs																			
Naphthalene	0.008 U	0.013 U	0.028 U	0.01 J	0.013 U	0.022 J	0.023 J	0.012 U	0.02 J	0.013 U	0.038 J	0.012 U	0.012 U	0.008 U	0.014 U	0.012 U	0.009 J	0.028 J	0.022 J
Acenaphthylene	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U	0.011 U	0.006 U	0.012 U	0.011 U	0.006 U	0.011 U	0.011 U
Acenaphthene	0.007 U	0.0094 U	0.0088 U	0.02 J	0.041 J	0.110 J	0.025 J	0.037 J	0.01 J	0.0093 U	0.023 J	0.0088 U	0.0088 U	0.14	0.30	0.19 J	0.009 J	0.024 J	0.015 J
Fluorene	0.006 U	0.013 U	0.012 U	0.006 U	0.013 U	0.012 U	0.012 U	0.012 U	0.006 U	0.013 U	0.012 U	0.012 U	0.012 U	0.006 U	0.014 U	0.012 U	0.006 U	0.013 U	0.012 U
Phenanthrene	0.01 J	0.038 J	0.028 J	0.04 J	0.047 J	0.057 J	0.039 J	0.021 J	0.04 J	0.06 J	0.06 J	0.028 J	0.016 J	0.10	0.52	0.16 J	0.02 J	0.034 J	0.039 J
Anthracene	0.008 J	0.063 J	0.110 J	0.006 U	0.016 U	0.015 U	0.015 U	0.015 U	0.006 U	0.019 J	0.016 J	0.015 U	0.015 U	0.006 U	0.071 J	0.060 J	0.006 U	0.016 U	0.017 J
2-Methylnaphthalene	0.008 U	0.013 U	0.012 U	0.008 J	0.012 J	0.017 J	0.013 J	0.012 U	0.008 U	0.012 U	0.015 J	0.012 U	0.012 U	0.008 U	0.013 U	0.012 U	0.008 U	0.012 U	0.012 U
Total LPAH	0.018	0.101	0.166	0.078	0.100	0.206	0.100	0.058	0.07	0.08	0.15	0.028	0.016	0.24	0.89	0.41	0.038	0.086	0.093
HPAHs																			
Fluoranthene	0.02 J	0.014 U	0.053 J	0.009 J	0.017 J	0.013 U	0.013 U	0.013 U	0.01 J	0.038 J	0.034 J	0.013 U	0.013 U	0.01 J	0.048 J	0.028 J	0.009 J	0.013 U	0.013 U
Pyrene	0.03 J	0.039 J	0.068 J	0.03 J	0.039 J	0.074 J	0.036 J	0.032 J	0.03 J	0.064 J	0.061 J	0.028 J	0.030 J	0.02 J	0.13 J	0.049 J	0.040 J	0.046 J	0.067 J
Benz(a)anthracene	0.01 J	0.013 U	0.024 J	0.007 J	0.013 U	0.012 U	0.012 U	0.012 U	0.008 J	0.013 U	0.012 U	0.012 U	0.012 U	0.007 J	0.013 U	0.012 U	0.006 J	0.013 U	0.012 U
Chrysene	0.02 J	0.015 U	0.033 J	0.007 J	0.015 U	0.014 U	0.014 U	0.014 U	0.01 J	0.015 U	0.014 U	0.014 U	0.014 U	0.008 J	0.016 U	0.014 U	0.008 J	0.015 U	0.014 U
Benzo(b)fluoranthene	0.01 J	0.021 U	0.033 J	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U	0.006 J	0.021 U	0.020 U	0.005 U	0.021 U	0.020 U
Benzo(k)fluoranthene	0.01 J	0.021 U	0.020 U	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U	0.006 J	0.021 U	0.020 U	0.020 U	0.020 U	0.006 J	0.021 U	0.020 U	0.003 J	0.021 U	0.020 U
Benzo(a)pyrene	0.02 J	0.018 U	0.051 J	0.007 J	0.017 U	0.016 U	0.016 U	0.016 U	0.007 J	0.017 U	0.016 U	0.016 U	0.016 U	0.007 J	0.018 U	0.016 U	0.006 U	0.017 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.02 J	0.026 U	0.050 J	0.009 J	0.026 U	0.024 U	0.024 U	0.024 U	0.009 J	0.026 U	0.024 U	0.024 U	0.024 U	0.007 J	0.027 U	0.024 U	0.007 J	0.026 U	0.024 U
Dibenz(a,h)anthracene	0.004 U	0.03 U	0.031 U	0.005 J	0.033 U	0.031 U	0.031 U	0.031 U	0.004 U	0.033 U	0.031 U	0.031 U	0.031 U	0.004 U	0.034 U	0.031 U	0.004 U	0.033 U	0.031 U
Benzo(g,h,i)perylene	0.02 J	0.039 J	0.061 J	0.01 J	0.018 U	0.017 U	0.017 U	0.017 U	0.02 J	0.034 J	0.025 J	0.017 U	0.017 U	0.009 J	0.019 U	0.017 U	0.03 J	0.054 J	0.031 J
Total HPAHs	0.16	0.08	0.37	0.10	0.06	0.07	0.04	0.03	0.106	0.136	0.120	0.028	0.030	0.080	0.178	0.077	0.103	0.100	0.098
SVOCs																			
3- and 4-Methylphenol Coelution	0.003 U	0.055 U	0.051 U	0.02 J	0.055 U	0.051 U	0.051 U	0.051 U	0.05 J	0.087 J	0.090 J	0.051 U	0.051 U	0.003 U	0.056 U	0.051 U	0.007 J	0.055 U	0.051 U
Dibenzofuran	0.007 U	0.015 U	0.014 U	0.007 U	0.014 U	0.014 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.014 U	0.014 U	0.007 U	0.015 U	0.014 U	0.007 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.02 U	0.028 U	0.026 U	0.02 U	0.028 U	0.026 U	0.026 U	0.026 U	0.02 U	0.028 U	0.026 U	0.026 U	0.026 U	0.02 U	0.028 U	0.026 U	0.02 U	0.028 U	0.026 U
Di-n-octyl Phthalate	0.003 U	0.035 U	0.032 U	0.003 U	0.035 U	0.032 U	0.032 U	0.032 U	0.003 U	0.035 U	0.032 U	0.032 U	0.032 U	0.003 U	0.036 U	0.032 U	0.003 U	0.035 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 4
PAHs and SVOCs (µg/L)
Groundwater
McCall Oil and Chemical

Sample Designation	EX-7	EX-7	EX-7	MW-1	MW-1	MW-1	MW-3	MW-3	MW-3 Dup	MW-3	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-5 Dup	MW-5	MW-5
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	12/20/00	03/06/02	10/03/02	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	03/07/02	10/03/02	12/20/00	03/07/02	10/03/02	12/20/00	03/07/02	10/03/02	10/03/02	02/11/04	10/22/04
Groundwater																			
LPAHs																			
Naphthalene	0.008 U	**0.14** J	**0.022** J	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.012 U	0.008 U	0.014 U	0.012 U	0.008 U	**0.034** J	0.012 U	**0.023**	**0.025** J	0.012 U
Acenaphthylene	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U	0.006 U	0.012 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U
Acenaphthene	0.007 U	0.0089 U	0.0088 U	0.007 U	0.0088 U	0.0088 U	**0.17**	**0.21**	**0.23**	**0.33**	**0.03** J	**0.064** J	**0.130** J	0.007 U	0.0094 U	0.0088 U	0.0088 U	0.0088 U	0.0088 U
Fluorene	0.006 U	0.013 U	0.012 U	0.006 U	0.012 U	0.014 U	0.006 U	0.012 U	0.012 U	0.012 U	0.006 U	0.014 U	0.012 U	0.006 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U
Phenanthrene	0.007 U	**0.016** J	**0.015** J	0.007 U	0.011 U	0.012 U	**0.13**	**0.18** J	**0.17** J	**0.27**	**0.06** J	**0.082** J	**0.086** J	0.007 U	0.011 U	**0.021** J	**0.021** J	0.011 U	0.011 U
Anthracene	0.006 U	**0.019** J	**0.038** J	0.006 U	0.015 U	**0.028** J	**0.02** J	**0.049** J	**0.055** J	**0.092** J	**0.01** J	**0.035** J	**0.046** J	0.006 U	0.016 U	**0.025** J	**0.022** J	0.015 U	0.015 U
2-Methylnaphthalene	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.012 U	0.008 U	0.013 U	0.012 U	0.008 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U
Total LPAH	0.008	**0.18**	**0.08**	0.008	0.015	**0.03**	**0.32**	**0.44**	**0.46**	**0.69**	**0.10**	**0.18**	**0.26**	0.008	**0.03**	**0.05**	**0.07**	**0.025**	0.015
HPAHs																			
Fluoranthene	0.007 U	**0.018** J	**0.024** J	0.007 U	0.013 U	0.013 U	**0.01** J	**0.065** J	**0.071** J	**0.087** J	**0.02** J	**0.04** J	0.013 U	0.007 U	0.014 U	**0.031** J	**0.026** J	0.013 U	0.013 U
Pyrene	0.007 U	**0.022** J	**0.028** J	0.007 U	0.015 U	0.015 U	**0.05** J	**0.13** J	**0.11** J	**0.19** J	**0.05** J	**0.11** J	**0.15** J	0.007 U	**0.024** J	**0.037** J	**0.034** J	0.015 U	0.015 U
Benz(a)anthracene	0.005 U	0.012 U	0.012 U	0.005 U	0.012 U	0.012 U	**0.008** J	0.012 U	**0.024** J	**0.048** J	**0.01** J	**0.053** J	**0.038** J	0.005 U	0.013 U	**0.030** J	0.012 U	0.012 U	0.012 U
Chrysene	0.006 U	0.015 U	0.014 U	0.006 U	0.014 U	0.014 U	**0.009** J	**0.033** J	**0.030** J	**0.062** J	**0.02** J	**0.048** J	**0.054** J	0.006 U	0.015 U	**0.022** J	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	0.005 U	0.020 U	0.020 U	0.005 U	0.020 U	0.020 U	**0.006** J	0.020 U	0.020 U	**0.055** J	**0.01** J	0.021 U	**0.044** J	0.005 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	**0.004** J	0.020 U	0.020 U	0.003 U	0.020 U	0.020 U	**0.006** J	0.020 U	0.020 U	0.020 U	**0.01** J	0.021 U	0.020 U	0.003 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	0.006 U	0.017 U	**0.019** J	0.006 U	0.016 U	0.016 U	**0.007** J	0.016 U	0.016 U	**0.077** J	**0.01** J	0.018 U	**0.043** J	0.006 U	0.018 U	0.016 U	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	**0.005** J	0.025 U	0.024 U	0.004 U	0.024 U	0.024 U	**0.008** J	0.024 U	0.024 U	**0.053** J	**0.01** J	0.026 U	**0.032** J	0.004 U	0.026 U	0.024 U	0.024 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.004 U	0.031 U	0.031 U	0.004 U	0.031 U	0.031 U	0.004 U	0.031 U	0.031 U	0.031 U	0.004 U	0.033 U	0.031 U	0.004 U	0.033 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	**0.007** J	0.017 U	**0.021** J	0.005 U	0.017 U	0.017 U	**0.009** J	**0.039** J	0.017 U	**0.066** J	**0.02** J	0.018 U	**0.048** J	0.005 U	0.018 U	0.017 U	0.017 U	0.017 U	0.017 U
Total HPAHs	**0.016**	**0.040**	**0.092**	0.007	0.031	0.031	**0.113**	**0.267**	**0.235**	**0.638**	**0.160**	**0.251**	**0.409**	0.007	**0.02**	**0.12**	**0.09**	0.031	0.031
SVOCs																			
3- and 4-Methylphenol Coelution	0.003 U	0.052 U	0.051 U	0.003 U	0.051 U	0.051 U	0.003 U	0.051 U	0.051 U	0.051 U	0.003 U	0.056 U	0.051 U	0.003 U	0.055 U	0.051 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.014 U	0.095 U	0.015 U	0.014 U	0.007 U	0.015 U	0.200 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.02 U	**0.041** J	0.026 U	0.02 U	**0.052** J	0.026 U	0.02 U	0.026 U	0.026 U	0.026 U	0.02 U	0.028 U	0.026 U	0.02 U	0.028 U	**0.048** J	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	0.003 U	0.033 U	0.032 U	0.003 U	0.032 U	0.032 U	0.003 U	0.032 U	0.032 U	0.032 U	0.003 U	0.035 U	0.032 U	0.003 U	0.035 U	0.014 U	0.014 U	0.032 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 4
PAHs and SVOCs (µg/L)
Groundwater
McCall Oil and Chemical

Sample Designation	MW-6	MW-6 Dup	MW-6	MW-6	MW-6 Dup	MW-7	MW-7	MW-7	MW-7	MW-7 Dup	MW-7	MW-8	MW-8	MW-8	MW-8	MW-8	MW-9	MW-9	MW-9 Dup	MW-9
	Groundwater																			
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	10/25/01	10/25/01	03/08/02	10/03/02	10/03/02	10/25/01	03/08/02	10/04/02	02/12/04	02/12/04	10/21/04	10/25/01	03/07/02	10/04/02	02/12/04	10/21/04	01/22/02	03/06/02	03/06/02	10/03/02
LPAHs																				
Naphthalene	5.00 U	5.00 U	0.12 J	0.048 J	0.066 J	5.00 U	0.086 J	0.020 J	0.012 U	0.012 U	0.012 U	5.00 U	0.16 J	0.38	0.031 J	0.012 U	0.17 J	0.013 U	0.012 U	0.012 U
Acenaphthylene	5.00 U	5.00 U	0.038 J	0.011 U	0.011 U	5.00 U	0.025 J	0.011 U	0.011 U	0.011 U	0.011 U	5.00 U	0.011 U	0.210	0.011 U	0.011 U	0.054 J	0.11 J	0.069 J	0.011 U
Acenaphthene	5.00 U	5.00 U	0.0095 U	0.0088 U	0.020 J	5.00 U	0.0092 U	0.0088 U	0.0088 U	0.045 J	0.032 J	5.00 U	0.58	0.78	0.34	0.21	0.120 J	0.12 J	0.15 J	0.25
Fluorene	5.00 U	5.00 U	0.02 J	0.012 U	0.012 U	5.00 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	5.00 U	0.56	0.91	0.36	0.22	0.012 U	0.01 U	0.012 U	0.012 U
Phenanthrene	5.00 U	5.00 U	0.13 J	0.039 J	0.059 J	5.00 U	0.077 J	0.034 J	0.024 J	0.036 J	0.011 U	5.00 U	1.2	1.7	0.22	0.22	0.26	0.22	0.16 J	0.20 J
Anthracene	5.00 U	5.00 U	0.047 J	0.045 J	0.049 J	5.00 U	0.039 J	0.031 J	0.019 J	0.029 J	0.015 U	5.00 U	0.097 J	0.380	0.028 J	0.015 U	0.090 J	0.098 J	0.067 J	0.079 J
2-Methylnaphthalene	5.00 U	5.00 U	0.025 J	0.012 U	0.012 U	5.00 U	0.034 J	0.012 U	0.012 U	0.012 U	0.012 U	5.00 U	0.081 J	0.160 J	0.012 U	0.0019 J	0.020 J	0.012 U	0.012 U	0.012 U
Total LPAH			0.38	0.13	0.19		0.26	0.09	0.043	0.11	0.03		2.68	4.52	0.98	0.65	0.71	0.55	0.45	0.53
HPAHs																				
Fluoranthene	5.00 U	5.00 U	0.18 J	0.08 J	0.12 J	5.00 U	0.061 J	0.013 U	0.013 U	0.013 U	0.013 U	5.00 U	0.22	0.73	0.035 J	0.048 J	0.25	0.33	0.13 J	0.11 J
Pyrene	5.00 U	5.00 U	0.25	0.12 J	0.20	5.00 U	0.089 J	0.025 J	0.015 U	0.015 U	0.015 U	5.00 U	0.34	1.10	0.066 J	0.079 J	0.41	0.48	0.26	0.24
Benz(a)anthracene	5.00 U	5.00 U	0.077 J	0.033 J	0.042 J	5.00 U	0.044 J	0.012 U	0.012 U	0.012 U	0.012 U	5.00 U	0.071 J	0.390	0.012 U	0.012 U	0.18 J	0.23	0.096 J	0.075 J
Chrysene	5.00 U	5.00 U	0.087 J	0.038 J	0.052 J	5.00 U	0.045 J	0.014 U	0.014 U	0.014 U	0.014 U	5.00 U	0.16 J	0.56	0.014 U	0.014 U	0.18 J	0.24	0.10 J	0.07 J
Benzo(b)fluoranthene	5.00 U	5.00 U	0.088 J	0.037 J	0.057 J	5.00 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	5.00 U	0.064 J	0.350	0.020 U	0.020 U	0.18 J	0.28	0.098 J	0.074 J
Benzo(k)fluoranthene	5.00 U	5.00 U	0.045 J	0.020 U	0.020 U	5.00 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	5.00 U	0.02 U	0.13 J	0.020 U	0.020 U	0.078 J	0.096 J	0.027 J	0.033 J
Benzo(a)pyrene	5.00 U	5.00 U	0.096 J	0.028 J	0.057 J	5.00 U	0.017 U	0.016 U	0.016 U	0.016 U	0.016 U	5.00 U	0.089 J	0.360	0.016 U	0.016 U	0.19 J	0.26	0.094 J	0.077 J
Indeno(1,2,3-cd)pyrene	5.00 U	5.00 U	0.088 J	0.037 J	0.057 J	5.00 U	0.026 U	0.024 U	0.024 U	0.024 U	0.024 U	5.00 U	0.04 J	0.25	0.024 U	0.024 U	0.12 J	0.15 J	0.062 J	0.053 J
Dibenz(a,h)anthracene	5.00 U	5.00 U	0.033 U	0.031 U	0.031 U	5.00 U	0.032 U	0.031 U	0.031 U	0.031 U	0.031 U	5.00 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	5.00 U	5.00 U	0.09 J	0.048 J	0.071 J	5.00 U	0.099 J	0.017 U	0.017 U	0.017 U	0.017 U	5.00 U	0.057 J	0.310	0.017 U	0.017 U	0.130 J	0.16 J	0.065 J	0.071 J
Total HPAHs			1.00	0.42	0.66		0.34	0.03	0.03	0.03	0.03		1.04	4.18	0.101	0.127	1.72	2.23	0.93	0.81
SVOCs																				
3- and 4-Methylphenol Coelution	5.00 U	5.00 U	0.073 J	0.051 U	0.051 U	5.00 U	1.1	0.05 U	0.051 U	0.051 U	0.051 U	5.00 U	0.22 J	1.60	0.051 U	0.051 U	0.051 U	0.052 U	0.051 U	0.051 U
Dibenzofuran	5.00 U	5.00 U	0.015 U	0.014 U	0.014 U	5.00 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	5.00 U	0.18 J	0.014 U	0.092 J	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	5.00 U	5.00 U	0.028 U	0.026 U	0.026 U	5.00 U	0.027 U	0.026 U	0.026 U	0.026 U	0.026 U	5.00 U	0.13 J	0.026 U	0.026 U	0.026 U	0.026 U	0.050 J	0.074 J	0.026 U
Di-n-octyl Phthalate	5.00 U	5.00 U	0.035 U	0.032 U	0.032 U	5.00 U	0.034 U	0.032 U	0.032 U	0.032 U	0.032 U	5.00 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 4
PAHs and SVOCs (µg/L)
Groundwater
McCall Oil and Chemical

Sample Designation	MW-10	MW-10	MW-10	MW-11	MW-11	MW-12	MW-12	MW-12	MW-13	MW-13 Dup	MW-13	MW-13	MW-14	MW-14	MW-15	MW-15
	Groundwater															
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Sampled	01/22/02	03/06/02	10/03/02	01/22/02	03/08/02	01/22/02	03/06/02	10/04/02	01/22/02	01/22/02	03/06/02	10/04/02	02/11/04	10/21/04	02/12/04	10/22/04
	LPAHs															
Naphthalene	0.058 J	0.24	0.012 U	0.012 U	0.12 U	0.11 J	0.12 J	0.012 U	0.190 J	0.25	0.24	0.10 J	0.023 J	0.012 U	0.016 J	0.012 U
Acenaphthylene	0.019 J	0.022 J	0.011 U	0.011 U	0.110 U	0.017 J	0.028 J	0.011 U	0.031 J	0.042 J	0.054 J	0.022 J	0.011 U	0.011 U	0.011 U	0.011 U
Acenaphthene	0.120 J	0.009 U	0.0088 U	0.43	1.6 JD	0.190 J	0.15 J	0.25	0.087 J	0.093 J	0.18 J	0.25	0.0310 J	0.0088 U	0.0088 U	0.0088 U
Fluorene	0.012 U	0.013 U	0.012 U	0.86	2.0 D	0.012 U	0.013 U	0.012 U	0.041 J	0.033 J	0.037 J	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Phenanthrene	0.073 J	0.08 J	0.012 J	1.80	3.0 D	0.11 J	0.11 J	0.15 J	0.11 J	0.13 J	0.19 J	0.14 J	0.011 U	0.011 U	0.011 U	0.011 U
Anthracene	0.032 J	0.029 J	0.029 J	0.41	0.660 JD	0.019 J	0.016 U	0.054 J	0.025 J	0.033 J	0.041 J	0.019 J	0.015 U	0.015 U	0.070 J	0.055 J
2-Methylnaphthalene	0.012 U	0.015 J	0.012 U	20 D	24 D	0.036 J	0.034 J	0.012 U	0.058 J	0.073 J	0.056 J	0.026 J	0.012 U	0.012 U	0.012 U	0.012 U
Total LPAH	0.30	0.39	0.04	23.50	31.26	0.48	0.44	0.45	0.54	0.65	0.80	0.56	0.054	0.015	0.086	0.055
	HPAHs															
Fluoranthene	0.081 J	0.10 J	0.016 J	0.43	0.38 JD	0.036 J	0.058 J	0.013 U	0.10 J	0.12 J	0.14 J	0.058 J	0.013 U	0.013 U	0.013 U	0.013 U
Pyrene	0.130 J	0.15 J	0.059 J	0.61	0.89 JD	0.076 J	0.11 J	0.10 J	0.14 J	0.19 J	0.19 J	0.11 J	0.015 U	0.015 U	0.021 J	0.024 J
Benz(a)anthracene	0.078 J	0.081 J	0.026 J	0.012 U	0.23 JD	0.012 U	0.052 J	0.012 U	0.038 J	0.053 J	0.063 J	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Chrysene	0.084 J	0.094 J	0.017 J	0.13 J	0.50 JD	0.047 J	0.046 J	0.014 U	0.052 J	0.056 J	0.075 J	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	0.056 J	0.070 J	0.020 U	0.02 U	0.20 U	0.020 U	0.021 U	0.020 U	0.020 U	0.072 J	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	0.020 U	0.037 J	0.020 U	0.02 U	0.20 U	0.020 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	0.071 J	0.090 J	0.016 U	0.016 U	0.16 U	0.016 U	0.018 U	0.016 U	0.044 J	0.072 J	0.098 J	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	0.024 U	0.052 J	0.024 U	0.024 U	0.24 U	0.024 U	0.026 U	0.024 U	0.024 U	0.053 J	0.082 J	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	0.031 U	0.031 U	0.031 U	0.031 U	0.31 U	0.031 U	0.033 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	0.047 J	0.061 J	0.017 U	0.017 U	0.17 U	0.017 U	0.047 J	0.017 U	0.017 U	0.072 J	0.110 J	0.021 J	0.017 U	0.017 U	0.017 U	0.017 U
Total HPAHs	0.55	0.74	0.12	1.17	2.00	0.16	0.31	0.10	0.37	0.69	0.76	0.26	0.031	0.031	0.021	0.024
	SVOCs															
3- and 4-Methylphenol Coelution	0.051 U	0.053 U	0.051 U	0.051 U	0.510 U	1.9	0.41 J	0.07 J	28 D	31 D	1.5	0.4 J	0.051 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	0.014 U	0.014 U	0.014 U	0.014 U	0.81 JD	0.20 U	0.015 U	0.014 U	0.018 J	0.021 J	0.021 J	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	0.045 J	0.040 J	0.026 U	0.026 U	0.26 U	0.20 U	0.028 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	0.032 U	0.033 U	0.032 U	0.032 U	0.32 U	0.20 U	0.035 U	0.032 U	0.032 U	0.032 U	0.034 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled																						
EX-1	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	1.8		0.5 U	2.0 U	0.5 U	4.4	20 U	0.5 U	9.9	5.9	0.5 U	240	0.5 U	0.5 U
EX-1	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	1.7		0.5 U	2.0 U	0.5 U	3.9	20 U	0.5 U	8.3	5.2	0.5 U	270	0.5 U	0.5 U
EX-1	Water	02/04/99		50 U	50 U	50 U	50 U	50 U	50 U	2000 U	50 U		50 U	200 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	120	50 U	50 U
EX-1	Water	02/04/99		50 U	50 U	50 U	50 U	50 U	50 U	2000 U	50 U		50 U	200 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	130	50 U	50 U
EX-1	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.53	20 U	0.5 U	0.5 U	0.5 U	0.5 U	9.1	0.5 U	0.5 U
EX-1	Water	03/07/02		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	3.2 D	100 U	2.5 U	2.5 U	2.5 U	2.5 U	13 D	2.5 U	2.5 U
EX-1	Water	10/03/02		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	0.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	11	2.5 U	2.5 U
EX-1	Water	02/11/04		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	0.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	22 D	2.5 U	2.5 U
EX-1 Duplicate	Water	02/11/04		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	0.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	24 D	2.5 U	2.5 U
EX-1	Water	10/22/04		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U		1.3 U	5.0 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	4.1 D	1.3 U	1.3 U
EX-2	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/03/99		0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/13/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
EX-1	Water	05/02/97	0.5 U	0.5 U	**410**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3300**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-1	Water	05/02/97	0.5 U	0.5 U	**470**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3600**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-1	Water	02/04/99	50 U	50 U	**220**	50 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	2000 U	50 U	**2600**	50 U	200 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
EX-1	Water	02/04/99	50 U	50 U	**250**	50 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	2000 U	50 U	**3000**	50 U	200 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
EX-1	Water	12/20/00	0.5 U	0.5 U	**20**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**400 D**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-1	Water	03/07/02	2.5 U	2.5 U	**32 D**	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**480 D**	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1	Water	10/03/02	2.5 U	2.5 U	**25**	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**340 D**	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1	Water	02/11/04	2.5 U	2.5 U	**82 D**	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**1700 D**	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1 Duplicate	Water	02/11/04	2.5 U	2.5 U	**89 D**	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**1700 D**	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1	Water	10/22/04	1.3 U	1.3 U	**19 D**	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**740 D**	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
EX-2	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.3**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.65**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.3**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/13/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibrono-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
EX-1	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	02/04/99	200 U	50 U	50 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	50 U	200 U	50 U	200 U	50 U	200 U	200 U	200 U	200 U	200 U
EX-1	Water	02/04/99	200 U	50 U	50 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	50 U	200 U	50 U	200 U	50 U	200 U	200 U	200 U	200 U	200 U
EX-1	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	03/07/02	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	10/03/02	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	02/11/04	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1 Duplicate	Water	02/11/04	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	10/22/04	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
EX-2	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	02/13/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*-1,2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis*-1,2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
EX-5	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		**1.4**	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**1.0**	20 U	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	02/04/99		0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	**0.8**	20 U	0.5 U	**3.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	**0.9**		0.5 U	2.0 U	0.5 U	**7.4**	20 U	0.5 U	**0.7**	**12.0**	0.5 U	**8.0**	0.5 U	0.5 U
MW-1	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**2.8**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**0.53**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**9.7**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**3.6**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	02/11/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**0.58**	20 U	0.5 U	**2.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**0.87**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1 Duplicate	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**0.88**	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	05/01/97		0.5 U	0.5 U	**5.9**	0.5 U	**0.5**	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**0.6**	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/04/99		0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	12/20/00	5.0 U	0.5 U	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	03/07/02		0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3 Duplicate	Water	03/07/02		0.5 U	0.5 U	**2.1**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/03/02		0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/11/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**3.5**	20 U	0.5 U	**4.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	**0.8**	20 U	0.5 U	**4.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
EX-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	05/02/97	0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.7**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	05/02/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	05/01/97	0.5 U	0.5 U	**28.0**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**110**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.7**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	12/20/00	0.5 U	0.5 U	**0.56**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3.5**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3.2**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.9**	0.5 U	0.5 U	20 U	0.5 U	**1.4**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	02/11/04	0.5 U	0.5 U	**5.2**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.3**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/22/04	0.5 U	0.5 U	**0.67**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.8**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1 Duplicate	Water	10/22/04	0.5 U	0.5 U	**0.65**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.9**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.7 Total	0.5 U	0.5 U	0.5 U
MW-3	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3 Duplicate	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	05/01/97	0.5 U	0.5 U	**8.1**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**11.0**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/03/99	0.5 U	0.5 U	**2.0**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.5**	**1.9**	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
EX-5	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	02/11/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1 Duplicate	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3 Duplicate	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	02/11/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis*-1, 2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
MW-4	Water	12/20/00	5.0 U	0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	03/07/02		0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/03/02		0.5 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**0.59**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Duplicate	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/11/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/25/01		2.5 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	125 U	2.5 U	10 U	50 U	25.0 U	**2.8**	**6.4**	50 U	2.5 U	**422**	2.5 U	2.5 U	**7.45**	2.5 U	2.5 U
MW-6 Duplicate	Water	10/25/01		2.5 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	125 U	2.5 U	10 U	50 U	25.0 U	**2.6**	**6.9**	50 U	2.5 U	**411**	2.5 U	2.5 U	**7.65**	2.5 U	2.5 U
MW-6	Water	03/08/02		2.5 U	2.5 U	**5.6 D**	2.5 U	2.5 U	2.5 U	100 U	**3.8 D**		2.5 U	10.0 U	**4.0 D**	**11.0 D**	100 U	2.5 U	**700 D**	2.5 U	2.5 U	**22 D**	2.5 U	2.5 U
MW-6	Water	10/03/02		1.3 U	1.3 UJ	**11.0 D**	1.3 U	1.3 U	1.3 U	50 U	**2.9 D**		1.3 U	5.0 U	**3.8 D**	**7.5 D**	50 U	1.3 U	**770 D**	1.3 U	1.3 U	**7.7 D**	1.3 U	1.3 U
MW-6 Duplicate	Water	10/03/02		1.3 U	1.3 UJ	**12.0 D**	1.3 U	1.3 U	1.3 U	50 U	**3.0 D**		1.3 U	5.0 U	**3.9 D**	**7.8 D**	50 U	1.3 U	**740 D**	1.3 U	1.3 U	**8.0 D**	1.3 U	1.3 U
MW-6	Water	02/12/04		1.3 U	1.3 U	**11.0 D**	1.3 U	1.3 U	1.3 U	50 U	**2.5 D**		1.3 U	5.0 U	**3.6 D**	**4.5 D**	50 U	1.3 U	**630 D**	1.3 U	1.3 U	**7.6 D**	1.3 U	1.3 U
MW-6	Water	10/21/04		2.5 U	2.5 U	**14.0 D**	2.5 U	2.5 U	2.5 U	100 U	**3.4 D**		2.5 U	10.0 U	**4.4 D**	**3.8 D**	100 U	2.5 U	**780 D**	2.5 U	2.5 U	**6.4 D**	2.5 U	2.5 U
MW-7	Water	10/25/01		0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	2.0 U	10.0 U	5.0 U	0.5 U	0.5 U	10 U	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	03/08/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**2.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	02/12/04		0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**5.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7 Duplicate	Water	02/12/04		0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**5.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/21/04		0.5 U	0.5 U	**0.78**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**3.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/25/01		0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	2.0 U	10.0 U	5.0 U	0.5 U	0.5 U	10 U	0.5 U	**1.21**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	02/12/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/21/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
MW-4	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Duplicate	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/25/01	2.5 U	5 U	**20.5**	2.5 U	2.5 U	2.5 U	50 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	**23**	2.5 U	2.5 U	2.5 U	2.5 U	5 U	10 U	5 U	5 U	2.5 U
MW-6 Duplicate	Water	10/25/01	2.5 U	5 U	**20.6**	2.5 U	2.5 U	2.5 U	50 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	**21.2**	2.5 U	2.5 U	2.5 U	2.5 U	5 U	10 U	5 U	5 U	2.5 U
MW-6	Water	03/08/02	2.5 U	2.5 U	**200** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**360** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-6	Water	10/03/02	1.3 U	1.3 U	**33** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**40** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-6 Duplicate	Water	10/03/02	1.3 U	1.3 U	**36** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**43** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-6	Water	02/12/04	1.3 U	1.3 U	**71** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**70** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-6	Water	10/21/04	2.5 U	2.5 U	**55** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**62** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-7	Water	10/25/01	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	1.0 U	0.5 U
MW-7	Water	03/08/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3.4**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.4**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7 Duplicate	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/25/01	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	1.0 U	0.5 U
MW-8	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
MW-4	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5 Duplicate	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	02/11/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-6	Water	10/25/01	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	5.0 U	2.5 U	10.0 U	2.5 U	25 U	2.5 U	25 U	2.5 U	2.5 U	10 U	10 U
MW-6 Duplicate	Water	10/25/01	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	5.0 U	2.5 U	10.0 U	2.5 U	25 U	2.5 U	25 U	2.5 U	2.5 U	10 U	10 U
MW-6	Water	03/08/02	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-6	Water	10/03/02	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6 Duplicate	Water	10/03/02	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	Water	02/12/04	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	Water	10/21/04	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-7	Water	10/25/01	2.0 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	2.0 U	0.5 U	5.0 U	0.5 U	5.0 U	0.5 U	0.5 U	2.0 U	2.0 U
MW-7	Water	03/08/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7 Duplicate	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/25/01	2.0 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	2.0 U	0.5 U	5.0 U	0.5 U	5.0 U	0.5 U	0.5 U	2.0 U	2.0 U
MW-8	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis*-1, 2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
MW-9 Duplicate	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	02/13/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/21/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-11	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-11	Water	03/08/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13 Duplicate	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	02/12/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	10/21/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	02/12/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
MW-9 Duplicate	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	01/22/02	0.5 U	0.5 U	**0.57**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/03/02	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	02/13/04	0.5 U	0.5 U	**0.66**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/21/04	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-11	Water	01/22/02	0.5 U	**2.0**	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.6**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	**4.7**	**3.1**	**8.2**	0.5 U	0.5 U
MW-11	Water	03/08/02	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.1**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	**2.9**	**2.3**	**5.2**	0.5 U	0.5 U
MW-12	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.52**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13 Duplicate	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
MW-9 Duplicate	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	02/13/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-11	Water	01/22/02	**4.2**	0.5 U	0.5 U	2.0 U	**6.1**	2.0 U	2.0 U	2.0 U	2.0 U	**4.5**	2.0 U	0.5 U	2.0 U	0.5 U	**2.4**	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-11	Water	03/08/02	**3.6**	0.5 U	0.5 U	2.0 U	**5.2**	2.0 U	2.0 U	2.0 U	2.0 U	**3.3**	2.0 U	0.5 U	2.0 U	0.5 U	**2.3**	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	**4.8**	2.0 U
MW-13	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13 Duplicate	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-14	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-14	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

Table 6
Metals
Groundwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Chromium	Copper
Monitoring Wells - Groundwater µg/L (ppb)						
EX-1	Total	Water	02/11/04	3.0		
EX-1 Duplicate	Total	Water	02/11/04	2.6		
EX-1	Dissolved	Water	02/11/04	1.6		
EX-1 Duplicate	Dissolved	Water	02/11/04	1.4		
EX-1	Total	Water	10/22/04	2.6		
EX-1	Dissolved	Water	10/22/04	1.9		
EX-2	Total	Water	02/11/04	57.1		
EX-2	Dissolved	Water	02/11/04	65.8		
EX-2	Total	Water	10/21/04	64.6		
EX-2	Dissolved	Water	10/21/04	72.4		
EX-3	Total	Water	02/12/04	87.2		
EX-3	Dissolved	Water	02/12/04	86.1		
EX-3	Total	Water	10/21/04	90.0		
EX-3	Dissolved	Water	10/21/04	90.2		
EX-4/MW-2	Dissolved	Water	12/20/00	8.8	8.1	2.0
EX-4/MW-2	Total	Water	03/07/02	56.8	5.8	7.7
EX-4/MW-2	Dissolved	Water	03/07/02	47.5	2.4	0.6
EX-4/MW-2	Dissolved	Water	10/03/02	14.9	0.4	2.5
EX-4/MW-2	Total	Water	02/13/04	53.1		
EX-4/MW-2	Dissolved	Water	02/13/04	55.2		
EX-4/MW-2	Total	Water	10/22/04	63.9		
EX-4/MW-2	Dissolved	Water	10/22/04	48.3		
EX-7	Total	Water	02/12/04	0.5		
EX-7	Dissolved	Water	02/12/04	0.5 U		
EX-7	Total	Water	10/21/04	0.6		
EX-7 Duplicate	Total	Water	10/21/04	0.5 U		
EX-7	Dissolved	Water	10/21/04	0.5 U		
EX-7 Duplicate	Dissolved	Water	10/21/04	0.5 U		
MW-1	Dissolved	Water	12/20/00	2.50 U	9.5	514
MW-1	Total	Water	03/07/02	0.80	1.9	139
MW-1	Dissolved	Water	03/07/02	1.00 U	2.0	130
MW-1	Dissolved	Water	10/03/02	0.8	0.3	196
MW-1	Total	Water	02/11/04	0.6	1.2	82.8
MW-1	Dissolved	Water	02/11/04	0.6	0.7	70.8
MW-1	Total	Water	10/22/04	0.9	0.2 U	242
MW-1 Duplicate	Total	Water	10/22/04	1.0	0.2 U	245
MW-1	Dissolved	Water	10/22/04	1.0	0.2 U	250
MW-1 Duplicate	Dissolved	Water	10/22/04	0.9	0.2 U	246

Table 6
Metals
Groundwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Chromium		Copper	
MW-3	Dissolved	Water	12/20/00	39.7	0.4	U	0.5	
MW-3	Total	Water	03/07/02	42.8	6.4		11.0	
MW-3 Duplicate	Total	Water	03/07/02	41.6	6.7		7.8	
MW-3	Dissolved	Water	03/07/02	43.4	5.7		1.3	
MW-3 Duplicate	Dissolved	Water	03/07/02	43.4	2.5		0.7	
MW-3	Dissolved	Water	10/03/02	49	0.7		0.9	
MW-3	Total	Water	02/11/04	46.9	2.5		1.8	
MW-3	Dissolved	Water	02/11/04	46.1	2.4		0.4	
MW-3	Total	Water	10/22/04	48.8	0.5		0.6	
MW-3	Dissolved	Water	10/22/04	49.1	0.2		0.4	
MW-4	Dissolved	Water	12/20/00	12.7	1.00	U	1.00	U
MW-4	Total	Water	03/07/02	9.2	8.70		29.90	
MW-4	Dissolved	Water	03/07/02	10.0	3.30		1.20	
MW-4	Dissolved	Water	10/03/02	16.5	0.20	U	0.70	
MW-5	Total	Water	02/11/04	15.7				
MW-5	Dissolved	Water	02/11/04	15.4				
MW-5	Total	Water	10/22/04	24.6				
MW-5	Dissolved	Water	10/22/04	19.5				
MW-6	Total	Water	10/25/01	29.8	67.8		98.8	
MW-6 Duplicate	Total	Water	10/25/01	27.3	35.0		48.6	
MW-6	Dissolved	Water	10/25/01	18.2	1.00	U	2.00	U
MW-6 Duplicate	Dissolved	Water	10/25/01	19.0	1.00	U	2.00	U
MW-6	Total	Water	03/08/02	6.8	9.6		18.3	
MW-6	Dissolved	Water	03/08/02	20.4	0.80		2.5	
MW-6	Dissolved	Water	10/03/02	23.5	0.20		0.6	
MW-6 Duplicate	Dissolved	Water	10/03/02	23.3	0.30		0.9	
MW-6	Total	Water	02/12/04	22.6				
MW-6	Dissolved	Water	02/12/04	22.6				
MW-6	Total	Water	10/21/04	22.4				
MW-6	Dissolved	Water	10/21/04	23.1				
MW-7	Total	Water	10/25/01	18.1	127		164	
MW-7	Dissolved	Water	10/25/01	3.04	1.00	U	2.00	U
MW-7	Total	Water	03/08/02	4.4	9.1		19.1	
MW-7	Dissolved	Water	03/08/02	3.5	2.3		1.3	
MW-7	Dissolved	Water	10/04/02	9.1	2.1		0.7	
MW-7	Total	Water	02/12/04	5	0.7		0.5	
MW-7 Duplicate	Total	Water	02/12/04	5	0.8		0.4	
MW-7	Dissolved	Water	02/12/04	5.1	2.0		0.3	
MW-7 Duplicate	Dissolved	Water	02/12/04	5.1	0.7		0.3	
MW-7	Total	Water	10/21/04	5.1	1.1		0.1	U
MW-7	Dissolved	Water	10/21/04	6.3	1.1		0.1	U

Table 6
Metals
Groundwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Chromium	Copper
MW-8	Total	Water	10/25/01	43.9	225	394
MW-8	Dissolved	Water	10/25/01	2.33	1.00 U	2.00 U
MW-8	Total	Water	03/07/02	4.3	14.7	36.1
MW-8	Dissolved	Water	03/07/02	8.6	2.9	1.3
MW-8	Dissolved	Water	10/04/02	9.6	1.4	0.3
MW-8	Total	Water	02/12/04	5.4	1.7	2.0
MW-8	Dissolved	Water	02/12/04	5.6	0.8	0.2
MW-8	Total	Water	10/21/04	10.1	3.1	3.8
MW-8	Dissolved	Water	10/21/04	10.3	1.0	0.1 U
MW-9	Total	Water	02/13/04	18.3		
MW-9	Dissolved	Water	02/13/04	19.0		
MW-9	Total	Water	10/22/04	28.5		
MW-9	Dissolved	Water	10/22/04	30.7		
MW-10	Total	Water	02/13/04	30.9		
MW-10	Dissolved	Water	02/13/04	28.9		
MW-10	Total	Water	10/21/04	32.8		
MW-10	Dissolved	Water	10/21/04	34.2		
MW-12	Total	Water	02/13/04	23.3		
MW-12	Dissolved	Water	02/13/04	23.7		
MW-12	Total	Water	10/21/04	27.4		
MW-12	Dissolved	Water	10/21/04	28.2		
MW-14	Total	Water	02/12/04	1.5	1.3	1.7
MW-14	Dissolved	Water	02/12/04	1.5	2.6	1.3
MW-14	Total	Water	10/21/04	2.7	0.6	2.4
MW-14	Dissolved	Water	10/21/04	1.5	0.5	2.1
MW-15	Total	Water	02/12/04	3.5		
MW-15	Dissolved	Water	02/12/04	3.4		
MW-15	Total	Water	10/22/04	7.6		
MW-15	Dissolved	Water	10/22/04	6.2		

Note: U = not detected at method reporting limit. µg/L = micrograms per liter. ppb = parts per billion.

Table 7
Total Petroleum Hydrocarbons
Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location	Matrix	Date Sampled	TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Catch Basins - Sediment mg/kg (ppm)								
S-1	Soil	12/15/00	**26**	Y	**400**	H	**1900**	O
S-2	Soil	12/15/00	**21**	Y	**300**	H	**2200**	DO
S-3	Soil	12/15/00	**580**	Y	**2400**	H	**7600**	DO
S-3	Soil	11/04/04	210	U	**1600**	JH	**8500**	JO
S3-01C	Soil	12/15/00	10	U	10	U	**30**	Y

Notes: U = Not detected at method reporting limit. F = Fingerprit of the sample matches the elution pattern of calibration standard
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.
Z = The fingerprint does not resemble a petroleum product.
D = The reported result is from a dilution.

TABLE 8
PAHs and SVOCs (µg/kg)
Catch Basin Sediment
McCall/GWCC

Sample Designation Matrix Date Sampled	S-1 Sediment 12/15/00	S-2 Sediment 12/15/00	S-3 Sediment 12/15/00	S-3 Sediment 11/04/04	S3-01C Sediment 12/15/00
			LPAHs		
Naphthalene	200 JD	50 JD	400 JD	64 JD	12 U
Acenaphthylene	40 JD	20 JD	60 JD	37 JU	12 U
Acenaphthene	200 JD	30 JD	720 U	26 JU	12 U
Fluorene	100 JD	20 JD	3600 D	72 JD	12 U
Phenanthrene	1500 D	320 D	3600 D	660 JD	12 U
Anthracene	400 JD	50 JD	2600 D	140 JD	12 U
2-Methylnaphthalene	100 JD	50 JD	400 JD	31 JU	0.6 J
Total LPAH	2540	540	10660	936	0.6
			HPAHs		
Fluoranthene	2600 D	690 D	5800 D	1400 JD	3 J
Pyrene	2600 D	770 D	5500 D	1200 JD	3 J
Benz(a)anthracene	1300 D	440 D	2500 D	400 JD	2 J
Chrysene	2000 D	740 D	5300 D	1100 JD	3 J
Benzo(b)fluoranthene	2000 D	780 D	4100 D	1100 JD	3 J
Benzo(k)fluoranthene	1500 D	540 D	3400 D	270 JD	2 J
Benzo(a)pyrene	1900 D	670 D	3700 D	490 JD	2 J
Indeno(1,2,3-cd)pyrene	1500 D	490 D	3200 D	530 JD	2 J
Dibenz(a,h)anthracene	300 JD	100 JD	800 JD	150 JD	24 U
Benzo(g,h,i)perylene	1600 D	500 D	3600 D	790 JD	3 J
Total HPAHs	17300	5720	37900	7430	23
			SVOCs		
3- and 4-Methylphenol Coelution	13000 U	1900 U	4000 JD	3000 JD	240 U
Dibenzofuran	100 JD	20 JD	200 JD	69 JD	12 U
Butyl Benzyl Phthalate	1500 D	2500 D	5000 D	930 JD	1 J
Di-n-octyl Phthalate	13000 U	1900 U	14000 U	11000 JD	2 J

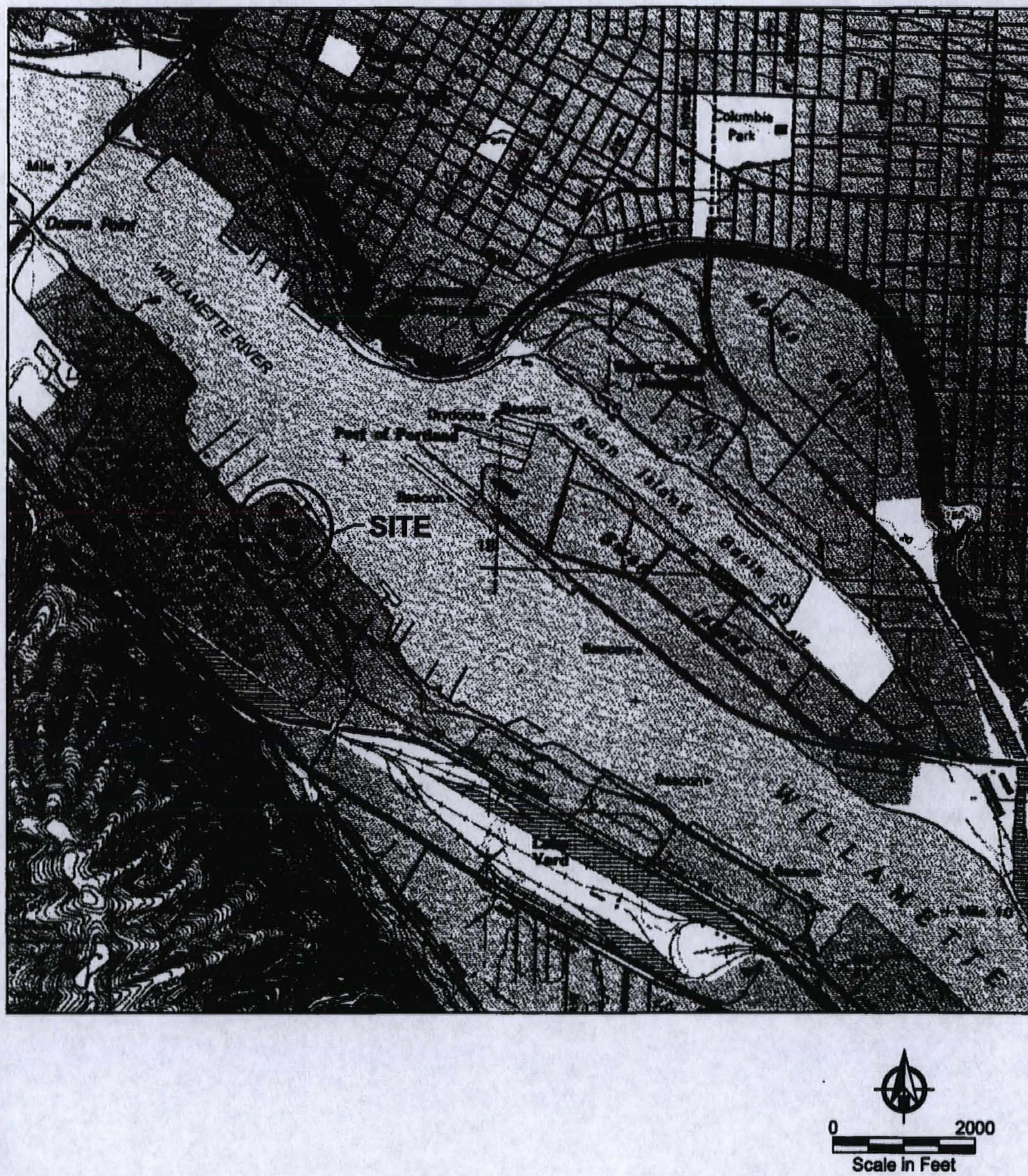
NOTE: µg/kg = micrograms per kilogram or part per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = reported result is from a dilution.

Table 9
Metals
Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location		Matrix	Date Sampled	Arsenic	Cadmium	Chromium	Copper	Lead	Zinc
Catch Basins - Sediment mg/kg (ppm)									
S-1	Total	Sediment	12/15/00	5.2	2.00	48.9	137	145	638
S-2	Total	Sediment	12/15/00	7.5	1.42	63.7	316	211	584
S-3	Total	Sediment	12/15/00	37.9	2.86	144	1050	454	985
S-3	Total	Sediment	11/04/04	25.6	1.90	189	1360	600	752
S3-01C	Total	Sediment	12/15/00	4.4	0.12	11.9	27.4	8.58	82.7

Note: U = not detected at method reporting limit. µg/L = micrograms per liter. ppb = parts per billion.

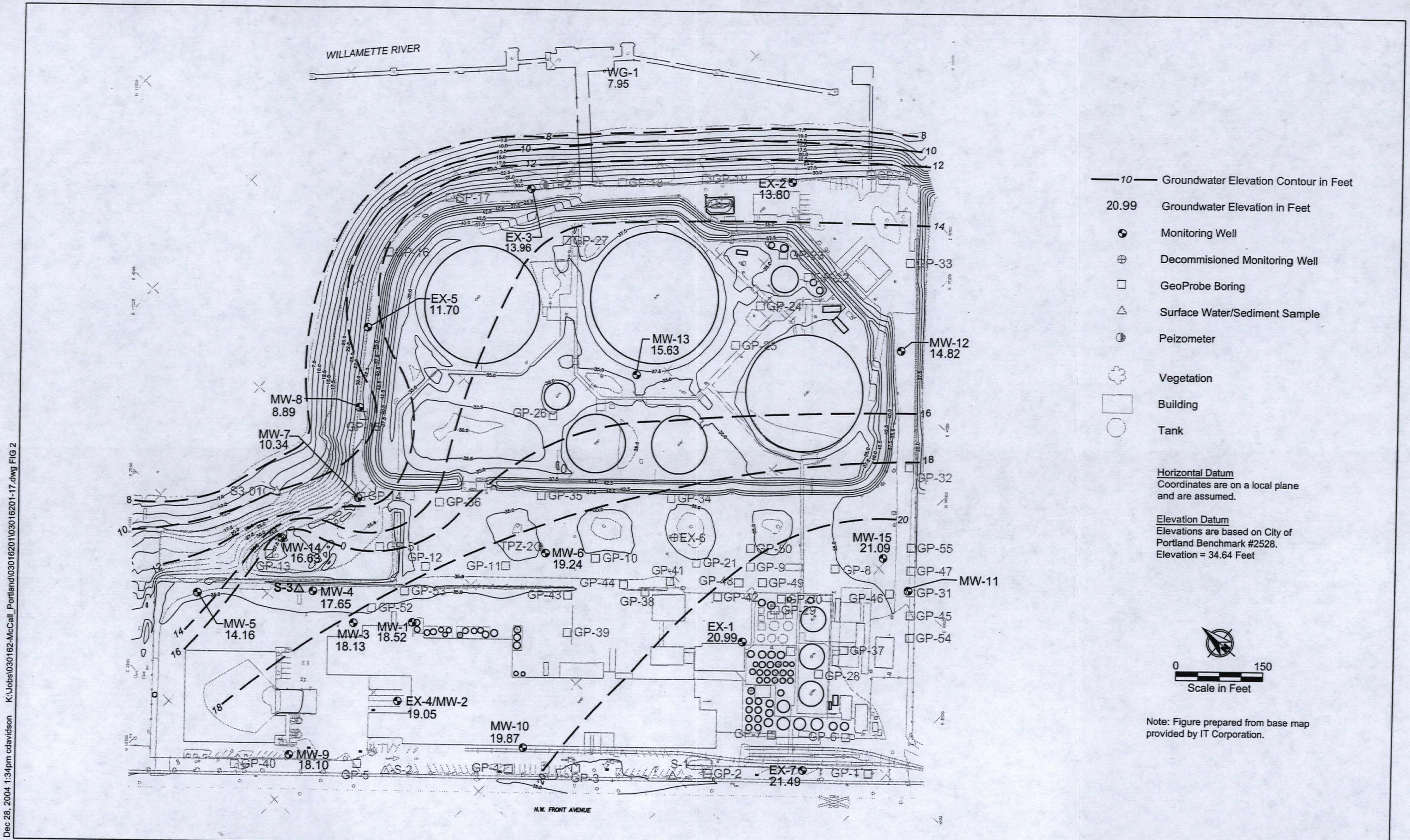
FIGURES



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical



Dec 28, 2004 1:34pm cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-17.dwg FIG 2

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Groundwater Potentiometric Surface Contour Map
October 20, 2004
McCall Oil and Chemical

ATTACHMENT A

FIELD SAMPLING DATA SHEETS

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

Memorandum

To: File 020162-02

From: Timothy Stone

Date: January 12, 2005

Re: October 2004 groundwater monitoring at McCall Oil and Chemical Corporation, Portland, Oregon

OVERVIEW

On October 20, 2004 Anchor Environmental, L.L.C.(Anchor), measured groundwater levels in 18 monitoring wells and the Willamette River staff gauge at McCall Oil and Chemical Corporation, Portland, Oregon (McCall). Eighteen samples were collected on October 21-22, 2004 from 16 monitoring wells. Anchor returned to the site on November 4, 2004 to collect a sediment sample from catch basin S-3. The samples were submitted for analysis as indicated on the chain of custody documentation (attached).

PURGING AND SAMPLING GROUNDWATER

Before sampling, wells were purged of at least three casing volumes and until field parameters (temperature, pH, and specific conductivity) stabilized. After each volume was removed, temperature, pH, and specific conductivity measurements were recorded on the field sampling data sheet (attached) for each well. The final field parameter measurements for each monitoring well are presented in the attached table.

Monitoring wells were purged and sampled using a peristaltic pump equipped with polyethylene tubing and Pharmed peristaltic pump tubing that has been dedicated to each monitoring well. Samples for dissolved metals were field filtered prior to field preservation with nitric acid.

Quality control consisted of analyzing two laboratory-supplied trip blanks that accompanied the sample containers to the field and back to the laboratory, and collecting and analyzing field duplicate samples from EX-7 and MW-1.

CATCH BASIN SEDIMENT SAMPLE

On November 4, 2004 Anchor collected a sample of the sediment which had accumulated in catch basin S-3. The sample was collected from below the standing water in the catch basin using a stainless steel scoop. Free water was decanted from the recovered sample and the remaining sediment was transferred directly into laboratory provided glass sample jars sealed with Teflon-lined lids. The samples were submitted to the laboratory for the analyses identified on the chain of custody documentation (attached).

SAMPLE HANDLING AND SHIPPING

Samples were stored at or below 4 degrees Celsius and delivered by courier to Columbia Analytical Services (CAS), Kelso, Washington, under chain of custody documentation.

Attachments: Table of Sampling Field Parameters
Task Sheet
Water Level Survey
Field Sampling Data Sheets
Chain-of-Custody Documentation

Table
Sampling Field Parameters
McCall Oil
Portland, Oregon
October 2004

Well	Blind Code	Date Sampled	Depth to Water (feet)	Pore Volumes Purged	Gallons Removed	pH	Specific Conductance µS	Temperature °C
Monitoring Wells								
EX-1	MO-102204-12	10/22/2004	15.13	3	4.5	4.78	305	19.56
EX-2	MO-102104-6	10/21/2004	18.48	3	3.0	6.34	620	18.96
EX-3	MO-102104-7	10/21/2004	18.11	3	3.0	6.33	671	18.64
EX-4 (MW-2)	MO-102204-17	10/22/2004	16.55	3	5.4	6.35	621	18.06
EX-7	MO-102104-2	10/21/2004	13.80	3	5.4	6.38	239	18.08
MW-1	MO-102204-13	10/22/2004	16.96	3	1.5	6.66	1143	17.61
MW-3	MO-102204-15	10/22/2004	16.43	3	6.0	6.38	925	17.30
MW-5	MO-102204-11	10/22/2004	20.50	3	7.2	6.60	1246	16.44
MW-6	MO-102104-4	10/21/2004	15.59	3	4.5	6.46	487	18.57
MW-7	MO-102104-9	10/21/2004	24.40	3	3.0	6.55	787	15.06
MW-8	MO-102104-8	10/21/2004	23.35	3	3.3	6.32	601	14.96
MW-9	MO-102204-16	10/22/2004	17.90	3	3.6	6.35	461	18.69
MW-10	MO-102104-1	10/21/2004	15.19	3	2.4	6.60	628	18.74
MW-12	MO-102104-5	10/21/2004	17.97	3	3.6	6.52	852	17.55
MW-14	MO-102104-10	10/21/2004	23.54	3	6.9	6.39	702	16.05
MW-15	MO-102204-18	10/22/2004	12.47	3	6.0	6.50	438	17.41
QA/QC								
EX-7 (FD)	MO-102104-3	10/21/2004	13.80	3	5.4	6.38	239	18.08
MW-1 (FD)	MO-102204-14	10/22/2004	16.96	3	1.5	6.66	1143	17.61

Notes:

NM = not measured

FD=field duplicate sample

NA = not applicable

McCall Oil Chemical Corporation
Task Sheet
October 2004

Site	Purge Start Time	DTB	DTW	Blind Code	Sample Time	Well Integrity
			Monitoring Wells			
EX-1	10:20	24.10	15.13	MO-102204-12	11:15	✓
EX-2	12:15	24.62	18.48	-102104-6	12:50	✓
EX-3	13:10	23.95	18.11	-102104-7	13:50	✓
EX-4 (MW-2)	13:55	27.30	16.55	-102204-17	14:30	✓
EX-7	09:13	24.60	13.80	-102104-2	10:00	✓
MW-1	11:30	19.95	16.96	-102204-13	12:00	✓
MW-3	12:10	26.95	16.43	-102204-15	12:55	✓
MW-5	09:00	35.20	20.50	-102204-11	10:00	✓
MW-6	10:40	24.50	15.59	-102104-4	11:20	✓
MW-7	15:10	30.0	24.40	-102104-9	16:00	
MW-8	14:05	29.83	23.35	-102104-8	15:00	✓
MW-9	13:05	25.03	17.90	-102204-16	13:45	✓
MW-10	08:00	19.85	15.19	-102104-1	08:53	✓
MW-12	11:30	24.82	17.97	-102104-5	11:59	✓
MW-14	16:15	37.45	23.54	-102104-10	17:00	✓
MW-15	14:45	24.40	12.47	-102204-18	15:30	✓
			QA\QC			
DUP (EX-7)	09:13	24.60	13.80	MO-102104-3	10:05	✓
DUP (MW-1)	11:30	19.95	16.96	MO-102204-14	12:05	✓
DUP	:	.	.		:	

Notes: 10/20/04 through 10/21/04 - Trip Blank #1 (submitted for VOCs)
10/22/04 through 10/29/04 - Trip Blank #2 (submitted for VOCs)

\\Union\Portland\Projects\McCall Portland\Sampling\TASK sheet.xls

WATER LEVEL FORM
McCall Oil/Great Western Chemical
February 2004

Well	Time	DTW	Comments
EX-1	1345	15.13	✓
EX-2	1550	18.48	✓
EX-3	1455	18.11	✓
EX-4 (MW-2)	1306	16.55	*
EX-5	~~1315~~ 1500 TS	~~20.50~~ 20.67 TS	✓
EX-7	1432	13.80	✓
MW-1	1336	16.96	✓
MW-3	1331	16.43	* corrosion in well monument
MW-4	1323	15.96	✓
MW-5	13:15	20.50	✓
MW-6	1522	15.59	✓
MW-7	1515	24.40	✓
MW-8	1507	23.35	✓
MW-9	1300	17.90	✓
MW-10	14:25	15.19	✓
MW-11	NA	NA	NA
MW-12	1538	17.97	✓
MW-13	1448	19.31	✓
MW-14	1512	23.54	✓
MW-15	1530	12.47	✓
WG-1	1610	~~32.33~~	✓
		29.33	

Notes:

PERSONNEL Tim Stone

PROBE# 25431

* replaced bolts / tap & cleanout boltholes to 7/16"

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-10
SITE ADDRESS: Portland, OR **BLIND ID:** MO-102104-1
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN			?	TEMPERATURE:	°F 58	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	14:25	19.85	.	15.19	.	4.66	X1	0.76
/ /	:	.	.	.	.		X3	2.28

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other -

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ if used
VOA Glass	10/21/04	08:53	B	3	40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 6

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA

Purge Start Time: 08:00 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]		Diss O_2 (mg/l)	Water Quality * [Clarity, Color]
4		.	.		.		.	
3	B	2.4	6.60	628	18.74		0.26	↑
2	B	1.6	6.61	628	18.74		0.29	Clear/slight yellow tint
1	B	0.8	6.58	632	18.71		0.41	Clear/yellow tint
0		0.00	.		.		.	

* trace of sheen

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 · Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** EX-7
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102104-2
DUP ID: MO-102104-3 (1005)

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?	TEMPERATURE:	°F 60				

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	14:32	24.60		13.80		10.80	X1	1.76
/ /	:	.	.	.	.		X3	5.28

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	10/21/04	10:00	B	1	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 6

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260B)
	AMBER - Glass	(TPH-FIQ) (PAH)
	WHITE - Poly	
	YELLOW - Poly	
	GREEN - Poly	
	RED TOTAL - Poly	(As) (Cr) (Cu)
	RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 09:13 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	5.4	6.38	239	18.08		0.25	
2	B	3.6	6.38	238	18.08		0.24	
1	B	1.8	6.38	238	18.08		0.22	Clear/colorless
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE) Tim Stone

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.

6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-6

SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102104-4 -

DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:** °F 60 .		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/21/04	15:22	24.50	.	15.59	.	8.91	X1	1.45
/ /	:	.	.	.	.		X3	4.36

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	10/21/04	11:20	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		/	250, 500, 1L	(None) (HCl) (H$_2$SO$_4$)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H$_2$SO$_4$	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		/	250, 500, 1L	HNO$_3$	YES	NO		√
Red Diss. Poly	/ /	:		/	250, 500, 1L	HNO$_3$	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 6

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FIQ) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA

Purge Start Time: 10:40 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O$_2$ (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	4.5	6.46	487	18.57		0.14	↑
2	B	3.0	6.46	487	18.57		0.15	
1	B	1.5	6.43	483	18.73		0.17	clear/colorless
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME:	McCall Oil	**WELL ID:**	MW-12
SITE ADDRESS:	Portland, OR	**BLIND ID:**	MO- 102104-5
		DUP ID:	( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?				**TEMPERATURE:** °F 55		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	15:38	24.82		17.97		6.85	X1	1.12
/ /	:	.	.	.	.		X3	3.35

Gal/ft = $(\text{dia.}/2)^2 \times 0.163$	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	10/21/04	:		3	40 ml	HCl	YES	NO		
Amber Glass	10/21/04	11:59	B	1	250, 500, 1L	(None) HCl H_2SO_4	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 3

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-HCID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 11:30 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]		Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	3.6	6.52	852	17.55		0.19	↑
2	B	2.4	6.52	853	17.55		0.21	
1	B	1.2	6.48	837	17.50		0.45	Clear/slight yellow tint
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

T. Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME:	McCall Oil	**WELL ID:**	EX-2
SITE ADDRESS:	Portland, OR	**BLIND ID:**	MO-102104-6
		DUP ID:	( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY	CLOUDY	RAIN		?	**TEMPERATURE:**	°F 55.					

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	15:50	24.62	.	18.48	.	6.14	X1	1.00
/ /	:	.	.	.	.		X3	3.00

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	10/21/04	12:50	B	*4	250, 500, 1L	(None) (HCl) (H$_2$SO$_4$)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H$_2$SO$_4$	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO$_3$	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO$_3$	YES	YES		√
	/ /	:			250, 500, 1L		YES			
		Total Bottles (include duplicate count):		6						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 12:15 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O$_2$ (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	3.0	6.34	620	18.96		0.25	↑
2	B	2.0	6.34	621	18.97		0.27	
1	B	1.0	6.34	617	18.93		0.30	Clear/Colorless
0		0.00	.		.		.	

* extra bottles for QC (TPH + PAH)

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** ~~[illegible]~~ EX-3
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102104-7
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?	TEMPERATURE: °F 55						

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	14:55	23.95		18.11		5.84	X1	0.95
/ /	:	.	.	.	.		X3	2.86

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	& Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	10/21/04	13:50	B	2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 4

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA

Purge Start Time: 13:10 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	3.0	6.33	671	18.64		0.54	
2	B	2.0	6.34	669	18.58		0.59	
1	B	1.0	6.35	671	18.53		1.04	Clear/Colorless
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-8

SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102104-8 -

DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:** °F 55.		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	15:07	29.83	.	23.35	.	6.48	X1	1.06
/ /	:	.	.	.	.		X3	3.17

Gal/ft = $(dia./2)^2 \times 0.163$	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	10/21/04	15:00	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		2	250, 500, 1L	None, HCl, H_2SO_4	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 7

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	8260B
AMBER - Glass	TPH-FIQ, PAH
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	As, Cr, Cu
RED DISSOLVED - Poly	As, Cr, Cu

WATER QUALITY DATA Purge Start Time: 14:05 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]		Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.				.	
3	B	3.3	6.32	601	14.96		0.28	clear/colorless
2	B	2.2	6.31	601	14.99		0.28	slight cloudy/tint
1	B	1.1	6.31	598	15.06		0.34	slight cloudy/tan
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
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Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-7
SITE ADDRESS: Portland, OR **BLIND ID:** MO-102104-9
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?	TEMPERATURE: °F 54						

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	15:15	30.0		24.40		5.60	X1	0.91
/ /	:	.	.	.	.		X3	2.74

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	& Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	10/21/04	16:00	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			
	Total Bottles (include duplicate count):			7						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 15:10 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	3.0	6.55	787	15.06		0.23	
2	B	2.0	6.54	807	15.07		0.34	
1	B	1.0	6.59	1051	15.12		0.40	Clear/Colorless
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.

6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil — WELL ID: MW-14

SITE ADDRESS: Portland, OR — BLIND ID: MO-102104-10 -

DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?	TEMPERATURE:	°F 50 .				

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	~~DT-Water~~	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	15:12	37.45	.	23.54	.	13.91	X1	2.27
/ /	:	.	.	.	.		X3	6.80

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) — Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	10/21/04	17:00	B	3	40 ml	HCl	YES	NO	.	√
Amber Glass	/ /	:		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 7

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA — Purge Start Time: 16:05 — Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.			.	.	
3	B	6.9	6.39	702	16.05	0.21	Clear/Colorless
2	B	4.6	6.35	695	16.04	0.26	Clear/Colorless
1	B	2.3	6.32	680	16.00	0.34	Slight cloudy/red tint
0		0.00	.		.	.	Dark Red/Rust/Cloudy

SAMPLER: Tim Stone (PRINTED NAME) — Tim Stone (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-5
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102204- 11 -
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN			?	TEMPERATURE: °F 50		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	13:15	35.20	.	20.50	.	14.7	X1	2.40
/ /	:	.	.	.	.		X3	7.18

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	10/22/04	10:00	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		4*	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 9

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As)
RED DISSOLVED - Poly	(As)

WATER QUALITY DATA Purge Start Time: 09:00 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	7.2	6.60	1246	16.44		0.37	↑
2	B	4.8	6.61	1240	16.43		0.47	
1	B	2.4	6.61	1239	16.43		0.56	Clear/Colorless
0		0.00	.		.		.	

* extra bottles for lab QC.

SAMPLER: Tim Stone (PRINTED NAME) Tim Stone (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** EX-1
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102204-12
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?	TEMPERATURE: °F 53						

(Circle appropriate units)

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	13:45	24.10	.	15.13	.	8.97	X1	1.46
/ /	:	.	.	.	.		X3	4.39

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	10/22/04	11:15	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		1	250, 500, 1L	(None) (HCl) (H$_2$SO$_4$)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H$_2$SO$_4$	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO$_3$	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO$_3$	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 6

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FIQ) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA

Purge Start Time: 10:20 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O$_2$ (mg/l)	Water Quality [Clarity, Color]
4		.			.		.	
3	B	4.5	4.78	305	19.56		0.25	clear/colorless
2	B	3.0	4.79	303	19.56		0.29	clear/slight yellow tint
1	B	1.5	4.79	303	19.54		0.35	slight cloudy/yellow tint
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-1
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102204-13
DUP ID: MO-102204-14 (1205)

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY		RAIN				?	TEMPERATURE:	°F 53	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	13:36	19.95	.	16.96	.	2.99	X1	0.49
/ /	:	.	.	.	.		X3	1.46

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√ if used
VOA Glass	10/22/04	12:00	B	3	40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 10

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-HCID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA

Purge Start Time: 11:30 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	1.5	6.66	1143	17.61		0.23	↑
2	B	1.0	6.65	1146	17.62		0.25	|
1	B	0.5	6.60	1174	17.57		0.34	Clear/Colorless
0		0.00	.		.		.	

SAMPLER: Tim Stone (PRINTED NAME) Tim Stone (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-3
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102204-15 -
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?	**TEMPERATURE:** °F 53 .				

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	~~DT-Water~~	DTP-DTW	~~DTB~~-DTW		Volume (gal)
10/20/04	13:31	26.95	.	16.43	.	10.52	X1	1.71
/ /	:	.	.	.	.		X3	5.14

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	10/22/04	12:55	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		1	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 6

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-FIQ) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 12:10 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (μS)	Temp °C	[redacted]	Diss O₂ (mg/l)	Water Quality
4	B	6.0	6.38	925	17.30		0.32	
3	B	5.4	6.38	953	17.29		0.33	
2	B	3.6	6.36	1076	17.31		0.50	
1	B	1.8	6.33	1072	17.31		0.82	Clear/Colorless
0		0.00	.		.		.	
[Casing]	[Select A-G]	[Cumulative Totals]			[Circle units]			[Clarity, Color]

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-9
SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102204-16 -
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN			?	TEMPERATURE:	°F 53.	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	13:00	25.03		17.90		7.13	X1	1.16
/ /	:	.	.	.	.		X3	3.49

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	10/22/04	:	B	3	40 ml	HCl	YES	NO		
Amber Glass	10/22/04	13:45	B	1	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 3

Analysis Allowed per Bottle Type — BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-HCID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 13:05 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	3.6	6.35	461	18.69		0.27	
2	B	2.4	6.29	438	18.68		0.31	
1	B	1.2	6.25	388	18.73		1.01	Clear/Colorless
0		0.00	.		.		.	

SAMPLER: Tim Stone (PRINTED NAME) T. Stone (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** EX-4 (MW-2)

SITE ADDRESS: Portland, OR **BLIND ID:** MO- 102204-17 -

DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	~~RAIN~~		?	**TEMPERATURE:** °F 53 .					

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	13:06	27.30	.	16.55	.	10.75	X1	1.72
/ /	:	.	.	.	.		X3	5.16

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	10/22/04	14:20	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		1	250, 500, 1L	(None) (HCl) (H₂SO₄)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 6

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-HCID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA Purge Start Time: 13:55 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (μS)	Temp °C [Circle units]	Diss O₂ (mg/l)	Water Quality [Clarity, Color]
4		.	.		.	.	
3	B	5.4	6.35	621	18.06	0.58	Clear/Colorless
2	B	3.6	6.35	621	18.07	0.60	Clear/Colorless
1	B	1.8	6.34	622	18.07	0.65	Clear/Colorless slightly
0		0.00	.		.	.	slight cloudy/red-tan tint

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: McCall Oil **WELL ID:** MW-15
SITE ADDRESS: Portland, OR **BLIND ID:** MO-102204-18
DUP ID: ( )

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN		?	TEMPERATURE:	°F 53				

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
10/20/04	15:30	24.40		12.47		11.93	X1	1.94
/ /	:	.	.	.	.		X3	5.83

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	10/22/04	15:30	B	3	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 7

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260B)
AMBER - Glass	(TPH-HCID) (PAH)
WHITE - Poly	
YELLOW - Poly	
GREEN - Poly	
RED TOTAL - Poly	(As) (Cr) (Cu)
RED DISSOLVED - Poly	(As) (Cr) (Cu)

WATER QUALITY DATA

Purge Start Time: 14:45 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	Temp °C [Circle units]	[redacted]	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4		.	.		.		.	
3	B	6.0	6.50	438	17.41		0.34	clear / colorless
2	B	4.0	6.50	438	17.41		0.35	clear / colorless
1	B	2.0	6.50	437	[illegible]		0.34	slight cloudy / red-tint
0		0.00	.		.		.	

SAMPLER: Tim Stone
(PRINTED NAME)

Tim Stone
(SIGNATURE)

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: ____________

PAGE 1 OF 1 COC #: ____________

PROJECT NAME: McCall Oil
PROJECT NUMBER:
PROJECT MANAGER: JOHN RENDA
COMPANY/ADDRESS: ANCHOR ENV., PORTLAND, OR
CITY/STATE/ZIP:
E-MAIL ADDRESS: JRENDA@ANCHORENV.COM
PHONE #: 503-670-408
FAX#: 670-1128
SAMPLER'S SIGNATURE: [signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS		Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☒ 8021☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ BTEX☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☒	Metals, (Total) or Dissolved (See list below)	Cyanide☐ Hex-Chrom☐	pH, Cond, Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020☐ AOX 1650☐ 506☐	8015 FIQ	TOT. + DIS. As			REMARKS
MO-102104-1	10/21/04	0853		H_2O	6			X													X	X			
-2		1000			3																X	X			
-3		1005			3																X	X			
-4		1120			6			X													X	X			
-5		1159			3																X	X			
-6		1250			*6										X						X	X			
-7		1350			4										X						X	X			
-8		1500			7			X							X	X					X				
-9		1600			7			X							X	X					X				
-10		1700			7			X							X	X					X				
TRIP BLANK-1								X																	

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* EXTRA bottles for QC (8015 + PAHS)

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # ____________

Bill To: ____________

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard (10-15 working days)

___ Provide FAX Results

____
Requested Report Date

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature: [signature]	Date/Time: 10-22-04/0600	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
Printed Name: Tim Stone	Firm: ANCHOR-PDX	Printed Name	Firm	Printed Name	Firm	Printed Name	Firm

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: ________

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC #________

PROJECT NAME McCall Oil
PROJECT NUMBER
PROJECT MANAGER JOHN RENDA
COMPANY/ADDRESS ANCHOR ENV, LLC
CITY/STATE/ZIP PORTLAND, OR 97224
E-MAIL ADDRESS
PHONE # 503-670-1108 FAX# 670-1128
SAMPLER'S SIGNATURE [signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ BTEX ☐	Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☒	Metals Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO4, PO4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	TOTAL + DISSOLVED As	8015 (FIQ)			REMARKS
MO-107204-11	10/22/04	1000		H_2O	9*		X							X						X	X			
-12		1115			6		X													X	X			
-13		1200			6		X								X						X			
-14		1205			6		X								X						X			
-15		1255			6		X								X						X			
-16		1345			3															X	X			
-17		1430			6		X													X	X			
18		1530			7		X							X						X	X			
TRIP 2					2		X																	

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # ________

Bill To: ________

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard (10-15 working days)

___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* extra QC bottles for FIQ + PAHs

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature] Date/Time 10-23-04/0700	Signature Date/Time	Signature Date/Time	Signature Date/Time
Printed Name TIM STONE Firm ANCHOR PDX	Printed Name Firm	Printed Name Firm	Printed Name Firm

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF COUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: ______ PAGE 1 OF 1 COC #______

PROJECT NAME McCall Oil
PROJECT NUMBER
PROJECT MANAGER JOHN RENDA
COMPANY/ADDRESS 6650 SW REDWOOD LN. #110
CITY/STATE/ZIP PORTLAND, OR 97224
E-MAIL ADDRESS
PHONE # 503-670-1108 FAX # 670-1128
SAMPLER'S SIGNATURE [signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☒ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ 418.1	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☒ *	Metals, Total or Dissolved (See list below)	Cyanide☐ Hex-Chrom☐	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020☐ AOX 1650☐ 506☐	* 4-methylphenol	* bis(2-ethylhexyl)phthalate	* Di-n-octylphthalate	* DIBENZOFURAN	REMARKS
MO-110404-CB	11/4/04	0745		S	2		X	X						X	X			X		X	X	X	X	

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # ______
Bill To: ______

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results
______
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* see Abbie S. for questions regarding 8270 list.

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature [signature]	Date/Time 11/8/04-0900	Signature	Date/Time	Signature	Date/Time	Signature	Date/Time
Printed Name Tim Fone	Firm ANCHOR-PDX	Printed Name	Firm	Printed Name	Firm	Printed Name	Firm

ATTACHMENT B

LABORATORY REPORT
AND
CHAIN OF CUSTODY DOCUMENTATION

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 3, 2004

Service Request No: K2408430

John Renda
Anchor Environmental
6650 SW Redwood Lane Suite 110
Portland, OR 97224

RE: McCall Oil and Chemical / 021062-02

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on October 25, 2004. For your reference, these analyses have been assigned our service request number K2408430.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281.

Respectfully submitted,

Columbia Analytical Services, Inc.

Abbie Spielman
Project Chemist

AS/jeb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

* The result is an outlier. See case narrative.
# The control limit criteria is not applicable. See case narrative.
B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E The result is an estimate amount because the value exceeded the instrument calibration range.
J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i The MRL/MDL has been elevated due to a matrix interference.
X See case narrative.

Metals Data Qualifiers

The control limit criteria is not applicable. See case narrative.
B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M The duplicate injection precision was not met.
N The Matrix Spike sample recovery is not within control limits. See case narrative.
S The reported value was determined by the Method of Standard Additions (MSA).
U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i The MRL/MDL has been elevated due to a matrix interference.
X See case narrative.
* The duplicate analysis not within control limits. See case narrative.
+ The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

* The result is an outlier. See case narrative.
# The control limit criteria is not applicable. See case narrative.
A A tentatively identified compound, a suspected aldol-condensation product.
B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D The reported result is from a dilution.
E The result is an estimate amount because the value exceeded the instrument calibration range.
J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i The MRL/MDL has been elevated due to a chromatographic interference.
X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Anchor Environmental	**Service Request No.:**	K2408430
Project:	McCall Oil	**Date Received:**	10/22/04
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Nine water samples were received for analysis at Columbia Analytical Services on 10/25/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total and Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Fuel Identification and Quantification by EPA Method 8015B

Sample Notes and Discussion:
The Gasoline results are semi-quantitative. Results are expected to exhibit a low bias due to a potential loss of volatile compounds during the extraction process.

No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260B

Elevated Method Reporting Limits:
Sample MO-102204-12 required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3940: tert-Butylbenzene, 1, 2, 4-Trimethylbenzene, sec-Butylbenzene, 4-Isopropyltoluene, and n-Butylbenzene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 11.0%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

No anomalies associated with the analysis of these samples were observed.

Approved by [signature] Date 12/3/04

Chain of Custody Documentation

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: K2408430

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC #

PROJECT NAME McCall Oil
PROJECT NUMBER
PROJECT MANAGER JOHN RENDA
COMPANY/ADDRESS ANCHOR ENV, LLC
CITY/STATE/ZIP PORTLAND, OR 97224
E-MAIL ADDRESS
PHONE # 503-670-1108 FAX# 670-1128
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 □ 8270 □ 8270LL □	Volatile Organics 624 □ 8260 □ 8260	Hydrocarbons (*see below) Gas □ 8021 □ BTEX □	Fuel Fingerprint (FIQ) □ Diesel □ Oil □ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM □ 1664 SGT □	PCB's Aroclors □ Congeners □	Pesticides/Herbicides 608 □ 8081A □ 8141A □ 8151A □	Chlorophenolics - 8151M Tri □ Tetra □ PCP □	PAHS 8310 □ SIM	Metals, Total or Dissolved (See list below)	Cyanide □	Hex-Chrom □	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020 □ AOX 1650 □ 506 □	TOTAL & DISSOLVED As	8015 FIQ			REMARKS
MD-102204-11	10/22/04	1000		H_2O	9*		X							X							X	X			
-12		1115			6		X														X	X			
-13		1200			6		X								X							X			
-14		1205			6		X								X							X			
-15		1255			6		X								X							X			
-16		1345			3																X	X			
-17		1430			6		X														X	X			
-18		1530			7		X							X							X	X			
TRIP 2					2		X																		

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # ______
Bill To: ______

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard (10-15 working days)

___ Provide FAX Results

______ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* extra QC bottles for FIQ & PAHs

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 10-25-04/0700	Signature: A. Juell Date/Time: 10/25/04 1330	Signature Date/Time	Signature Date/Time
Printed Name: TIM STONE Firm: ANCHOR-PDX	Printed Name Firm: CAS	Printed Name Firm	Printed Name Firm

RCOC #1 08/03

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC [illegible]

Project/Client Anchor Env. Work Order K240 8430

Cooler received on 10-25-04 and opened on 10-25-04 by BW

1. Were custody seals on outside of coolers? Y N
   If yes, how many and where? 1 Front
2. Were custody seals intact? Y N
3. Were signature and date present on the custody seals? Y N
4. Is the shipper's airbill available and filed? If no, record airbill number: ~~Y N~~
5. COC#

Temperature of cooler(s) upon receipt: (°C)	2.2	1.6	0.8	
Temperature Blank: (°C)	0.3	N.P	1.9	

Were samples hand delivered on the same day as collection? ~~Y N~~

6. Were custody papers properly filled out (ink, signed, etc.)? Y N
7. Type of packing material present ice, foam insert
8. **Did all bottles arrive in good condition (unbroken)?** Y N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? Y N
10. Did all bottle labels and tags agree with custody papers? Y N
11. **Were the correct types of bottles used for the tests indicated?** Y N
12. Were all of the preserved bottles received at the lab with the appropriate pH? Y N
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? Y N
14. Did the bottles originate from CAS/K or a branch laboratory? Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** ~~Y N~~
16. Was C12/Res negative? Y N

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Metals

METALS

- Cover Page -

INORGANIC ANALYSIS DATA PACKAGE

Client: McCall Oil

Service Request: K2408430

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Sample No.	Lab Sample ID.
MO-102204-11	K2408430-001
MO-102204-11 DISS	K2408430-001 DISS
MO-102204-11D	K2408430-001D
MO-102204-11 DISSD	K2408430-001D DISS
MO-102204-11S	K2408430-001S
MO-102204-11 DISSS	K2408430-001S DISS
MO-102204-12	K2408430-002
MO-102204-12	K2408430-002 DISS
MO-102204-13	K2408430-003
MO-102204-13	K2408430-003 DISS
MO-102204-14	K2408430-004
MO-102204-14	K2408430-004 DISS
MO-102204-15	K2408430-005
MO-102204-15	K2408430-005 DISS
MO-102204-16	K2408430-006
MO-102204-16	K2408430-006 DISS
MO-102204-17	K2408430-007
MO-102204-17	K2408430-007 DISS
MO-102204-18	K2408430-008
MO-102204-18	K2408430-008 DISS
Method Blank	K2408430-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Total and Dissolved Metals

Signature: [signature]

Date: 12/3/04

00010

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-11 MW-5 **Lab Code:** K2408430-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	24.6		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-11 DISS MW-5 Lab Code: K2408430-001 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	19.5		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-12 EX-1 Lab Code: K2408430-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	2.6		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-12 EX-1   Lab Code: K2408430-002 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	1.9		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-13 MW-1 Lab Code: K2408430-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.9		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2	U	
Copper	200.8	1.0	10	11/13/04	11/29/04	242		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-13 MW-1

Lab Code: K2408430-003 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	1.0		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2	U	
Copper	200.8	1.0	10	11/13/04	11/29/04	250		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-14 MW-1 dup   Lab Code: K2408430-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	1.0		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2	U	
Copper	200.8	1.0	10	11/13/04	11/29/04	245		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-14 MW-1 dup

Lab Code: K2408430-004 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.9		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2	U	
Copper	200.8	1.0	10	11/13/04	11/29/04	246		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-15 MW-3   Lab Code: K2408430-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	48.8		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.5		
Copper	200.8	0.1	1	11/13/04	11/29/04	0.6		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-15 MW-3 Lab Code: K2408430-005 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	49.1		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2		
Copper	200.8	0.1	1	11/13/04	11/29/04	0.4		

% Solids: 0.0

Comments: Dissolved Metals

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-16 MW-9 **Lab Code:** K2408430-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	28.5		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-16 MW-9

Lab Code: K2408430-006 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	30.7		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-17 EX-4/mw2 Lab Code: K2408430-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	63.9		

% Solids: 0.0

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-17 EX-4/MW-2   Lab Code: K2408430-007 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	48.3		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Matrix: WATER

Service Request: K2408430

Date Collected: 10/22/04

Date Received: 10/25/04

Units: µG/L

Basis: NA

Sample Name: MO-102204-18 MW-15

Lab Code: K2408430-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	7.6		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected: 10/22/04
Date Received: 10/25/04
Units: µG/L
Basis: NA

Sample Name: MO-102204-18 MW-15

Lab Code: K2408430-008 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	6.2		

% Solids: 0.0

Comments: Dissolved Metals

00026

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank

Lab Code: K2408430-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.5	U	
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2	U	
Copper	200.8	0.1	1	11/13/04	11/29/04	0.1	U	

% Solids: 0.0

Comments:

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: MO-102204-11 DISSS

Lab Code: K2408430-001S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	38.2		19.5		20.0	94		200.8
Chromium	70 - 130	20.7		0.3		20.0	102		200.8
Copper	70 - 130	17.3		0.3		20.0	85		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: MO-102204-11S   Lab Code: K2408430-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	43.7		24.6		20.0	96		200.8
Chromium	70 - 130	21.7		1.5		20.0	101		200.8
Copper	70 - 130	17.6		0.5		20.0	86		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-6-
DUPLICATES

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408430
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: MO-102204-11 DISSD   Lab Code: K2408430-001D DISS

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	20	19.5		20.2		4		200.8
Chromium		0.3		0.3		2		200.8
Copper		0.3		0.3		8		200.8

00030

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Matrix: WATER

Service Request: K2408430

Units: µg/L

Basis: NA

% Solids: 0.0

Sample Name: MO-102204-11D

Lab Code: K2408430-001D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	20	24.6		24.9		1		200.8
Chromium	20	1.5		1.7		15		200.8
Copper		0.5		0.5		4		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: McCall Oil Service Request: K2408430

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Aqueous LCS Source: Inorganic Ventures Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	20.0	19.7	99					
Chromium	20.0	20.2	101					
Copper	20.0	20.0	100					

00032

Fuel Identification Quantification
EPA Method 8015

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-11 MW-5	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	540	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	330	L	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	81	42-124	11/03/04	Acceptable
o-Terphenyl	87	37-141	11/03/04	Acceptable
n-Triacontane	91	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-12 Ex-1	**Units:**	ug/L
Lab Code:	K2408430-002	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	210	Z	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	110	H	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	90	42-124	11/03/04	Acceptable
o-Terphenyl	92	37-141	11/03/04	Acceptable
n-Triacontane	94	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-13 MW-1	**Units:**	ug/L
Lab Code:	K2408430-003	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**300**	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**320**	L	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	68	42-124	11/03/04	Acceptable
o-Terphenyl	89	37-141	11/03/04	Acceptable
n-Triacontane	94	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-14	**Units:**	ug/L
Lab Code:	K2408430-004	**Basis:**	NA
Extraction Method:	EPA 3510C MW-1 Dup	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**270**	**Y**	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**320**	**L**	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	64	42-124	11/03/04	Acceptable
o-Terphenyl	84	37-141	11/03/04	Acceptable
n-Triacontane	91	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-15 MW-3	**Units:**	ug/L
Lab Code:	K2408430-005	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	150	H	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	2400	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	540	L	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	49	42-124	11/03/04	Acceptable
o-Terphenyl	74	37-141	11/03/04	Acceptable
n-Triacontane	79	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-16 MW-9	**Units:**	ug/L
Lab Code:	K2408430-006	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	130	H	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	1100	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	510	L	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	73	42-124	11/03/04	Acceptable
o-Terphenyl	76	37-141	11/03/04	Acceptable
n-Triacontane	81	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-17	**Units:**	ug/L
Lab Code:	K2408430-007	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

EX-4 / MW-2

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	240	H	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	1700	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	610	L	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	77	42-124	11/03/04	Acceptable
o-Terphenyl	82	37-141	11/03/04	Acceptable
n-Triacontane	86	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-18	**Units:**	ug/L
Lab Code:	K2408430-008 MW-15	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**110**	H	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	90	42-124	11/03/04	Acceptable
o-Terphenyl	94	37-141	11/03/04	Acceptable
n-Triacontane	99	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0416862-6	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	86	42-124	11/03/04	Acceptable
o-Terphenyl	93	37-141	11/03/04	Acceptable
n-Triacontane	97	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408430

Surrogate Recovery Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method: EPA 3510C
Analysis Method: 8015M

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MO-102204-11	K2408430-001	81	87	91
MO-102204-12	K2408430-002	90	92	94
MO-102204-13	K2408430-003	68	89	94
MO-102204-14	K2408430-004	64	84	91
MO-102204-15	K2408430-005	49	74	79
MO-102204-16	K2408430-006	73	76	81
MO-102204-17	K2408430-007	77	82	86
MO-102204-18	K2408430-008	90	94	99
Method Blank	KWG0416862-6	86	93	97
MO-102204-11MS	KWG0416862-3	68	86	90
Lab Control Sample	KWG0416862-5	83	87	91
Duplicate Lab Control Sample	KWG0416862-7	87	88	91

Surrogate Recovery Control Limits (%)

Sur1 = 4-Bromofluorobenzene	42-124
Sur2 = o-Terphenyl	37-141
Sur3 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	10/28/2004
Sample Matrix:	Water	**Date Analyzed:**	11/03/2004

Matrix Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102204-11	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M	**Extraction Lot:**	KWG0416862

		MO-102204-11MS KWG0416862-3 Matrix Spike			
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Diesel Range Organics (DRO)	540	3830	3200	103	54-161
Residual Range Organics (RRO)	330	1940	1600	100	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	10/28/2004
Sample Matrix:	Water	**Date Analyzed:**	11/03/2004

Lab Control Spike/Duplicate Lab Control Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method:	EPA 3510C	**Units:**	ug/L
Analysis Method:	8015M	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0416862

	Lab Control Sample KWG0416862-5 **Lab Control Spike**			Duplicate Lab Control Sample KWG0416862-7 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	3800	3200	119	3780	3200	118	71-146	0	30
Residual Range Organics (RRO)	1740	1600	109	1710	1600	107	53-143	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Volatile Organic Compounds
EPA Method 8260B

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-11 MW-5	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-11 MW-5	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-11	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	11/04/04	Acceptable
Toluene-d8	95	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	97	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-12 Ex-1	**Units:**	ug/L
Lab Code:	K2408430-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	50	2.5	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	50	2.5	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Chloroform	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	**4.1**	**D**	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	**19**	**D**	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	50	2.5	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	50	2.5	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-12	**Units:**	ug/L
Lab Code:	K2408430-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	740	D	13	25	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	1.3	2.5	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	5.0	2.5	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-12	**Units:**	ug/L
Lab Code:	K2408430-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	11/04/04	Acceptable
Toluene-d8	93	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	93	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-13 MW-1	**Units:**	ug/L
Lab Code:	K2408430-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroform	**0.87**		0.50	1	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	**0.67**		0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-13 MW-1	**Units:**	ug/L
Lab Code:	K2408430-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	**2.8**		0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-13	**Units:**	ug/L
Lab Code:	K2408430-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	11/04/04	Acceptable
Toluene-d8	91	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	95	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-14 MW-1 dup	**Units:**	ug/L
Lab Code:	K2408430-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroform	**0.88**		0.50	1	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	**0.65**		0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-14 MW-1 dup	**Units:**	ug/L
Lab Code:	K2408430-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	2.9		0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-14	**Units:**	ug/L
Lab Code:	K2408430-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	85-115	11/04/04	Acceptable
Toluene-d8	94	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	94	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-15 MW-3	**Units:**	ug/L
Lab Code:	K2408430-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-15 MW-3	**Units:**	ug/L
Lab Code:	K2408430-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-15	**Units:**	ug/L
Lab Code:	K2408430-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	85-115	11/04/04	Acceptable
Toluene-d8	94	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	100	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-17 EX-4/MW-2	**Units:**	ug/L
Lab Code:	K2408430-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-17 EX-4/MW-2	**Units:**	ug/L
Lab Code:	K2408430-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	

Comments:

00063

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-17	**Units:**	ug/L
Lab Code:	K2408430-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	11/04/04	Acceptable
Toluene-d8	94	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	98	72-115	11/04/04	Acceptable

Comments:

00064

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-18 MW-15	**Units:**	ug/L
Lab Code:	K2408430-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Chloroform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Trichloroethene (TCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-18 MW-15	**Units:**	ug/L
Lab Code:	K2408430-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	MO-102204-18	**Units:**	ug/L
Lab Code:	K2408430-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	85-115	11/04/04	Acceptable
Toluene-d8	93	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	93	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	Trip 2	**Units:**	ug/L
Lab Code:	K2408430-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Chloroform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Trichloroethene (TCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	Trip 2	**Units:**	ug/L
Lab Code:	K2408430-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Volatile Organic Compounds

Sample Name:	Trip 2	**Units:**	ug/L
Lab Code:	K2408430-009	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	85-115	11/04/04	Acceptable
Toluene-d8	95	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	101	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417577-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Chloromethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Vinyl Chloride	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Bromomethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Chloroethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Trichlorofluoromethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Acetone	ND	U	20	1	11/03/04	11/03/04	KWG0417577	
1,1-Dichloroethene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Carbon Disulfide	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Methylene Chloride	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,1-Dichloroethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
2-Butanone (MEK)	ND	U	20	1	11/03/04	11/03/04	KWG0417577	
2,2-Dichloropropane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Chloroform	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Bromochloromethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,1-Dichloropropene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Carbon Tetrachloride	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Benzene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Trichloroethene (TCE)	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,2-Dichloropropane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Bromodichloromethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Dibromomethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
2-Hexanone	ND	U	20	1	11/03/04	11/03/04	KWG0417577	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Toluene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,1,2-Trichloroethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/03/04	11/03/04	KWG0417577	
1,3-Dichloropropane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417577-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Dibromochloromethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
Chlorobenzene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Ethylbenzene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
m,p-Xylenes	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
o-Xylene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Styrene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Bromoform	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Isopropylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,2,3-Trichloropropane	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
Bromobenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
n-Propylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
2-Chlorotoluene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
4-Chlorotoluene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
tert-Butylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
sec-Butylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,3-Dichlorobenzene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
4-Isopropyltoluene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,4-Dichlorobenzene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
n-Butylbenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,2-Dichlorobenzene	ND	U	0.50	1	11/03/04	11/03/04	KWG0417577	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
Naphthalene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	
Hexachlorobutadiene	ND	U	2.0	1	11/03/04	11/03/04	KWG0417577	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417577-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	11/03/04	Acceptable
Toluene-d8	95	86-114	11/03/04	Acceptable
4-Bromofluorobenzene	95	72-115	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417645-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Chloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Vinyl Chloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Chloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Trichlorofluoromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Acetone	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
1,1-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Carbon Disulfide	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Methylene Chloride	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1-Dichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
2-Butanone (MEK)	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
2,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Chloroform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Carbon Tetrachloride	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Benzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Trichloroethene (TCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromodichloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Dibromomethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
2-Hexanone	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Toluene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1,2-Trichloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/04/04	11/04/04	KWG0417645	
1,3-Dichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417645-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Dibromochloromethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
Chlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Ethylbenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
m,p-Xylenes	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
o-Xylene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Styrene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromoform	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Isopropylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2,3-Trichloropropane	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
Bromobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
n-Propylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
2-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
4-Chlorotoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
tert-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
sec-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,3-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
4-Isopropyltoluene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,4-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
n-Butylbenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2-Dichlorobenzene	ND	U	0.50	1	11/04/04	11/04/04	KWG0417645	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
Naphthalene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	
Hexachlorobutadiene	ND	U	2.0	1	11/04/04	11/04/04	KWG0417645	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417645-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	85-115	11/04/04	Acceptable
Toluene-d8	95	86-114	11/04/04	Acceptable
4-Bromofluorobenzene	93	72-115	11/04/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02		
Sample Matrix:	Water		

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	PERCENT
Analysis Method:	8260B	**Level:**	Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MO-102204-11	K2408430-001	96	95	97
MO-102204-12	K2408430-002	96	93	93
MO-102204-13	K2408430-003	97	91	95
MO-102204-14	K2408430-004	99	94	94
MO-102204-15	K2408430-005	98	94	100
MO-102204-17	K2408430-007	97	94	98
MO-102204-18	K2408430-008	100	93	93
Trip 2	K2408430-009	99	95	101
Method Blank	KWG0417577-4	96	95	95
Method Blank	KWG0417645-4	100	95	93
MO-102204-11MS	KWG0417577-1	97	98	103
MO-102204-11DMS	KWG0417577-2	98	100	104
Lab Control Sample	KWG0417577-3	98	100	103
Lab Control Sample	KWG0417645-3	100	100	103

Surrogate Recovery Control Limits (%)

Sur1 =	Dibromofluoromethane	85-115
Sur2 =	Toluene-d8	86-114
Sur3 =	4-Bromofluorobenzene	72-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	11/03/2004
Sample Matrix:	Water	**Date Analyzed:**	11/03/2004

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	MO-102204-11	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B	**Extraction Lot:**	KWG0417577

		MO-102204-11MS KWG0417577-1 Matrix Spike			MO-102204-11DMS KWG0417577-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	ND	11.4	10.0	114	11.5	10.0	115	66-147	0	30
Benzene	ND	9.79	10.0	98	9.69	10.0	97	81-130	1	30
Trichloroethene (TCE)	ND	10.4	10.0	104	10.3	10.0	103	63-138	1	30
Toluene	ND	9.66	10.0	97	9.48	10.0	95	76-130	2	30
Chlorobenzene	ND	10.6	10.0	106	10.4	10.0	104	77-123	2	30
1,2-Dichlorobenzene	ND	9.74	10.0	97	9.58	10.0	96	73-125	2	30
Naphthalene	ND	12.3	10.0	123	13.3	10.0	133	54-160	8	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00078

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	11/03/2004
Sample Matrix:	Water	**Date Analyzed:**	11/03/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0417577

	Lab Control Sample KWG0417577-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	9.91	10.0	99	52-179
Chloromethane	7.92	10.0	79	58-129
Vinyl Chloride	9.97	10.0	100	74-138
Bromomethane	11.7	10.0	117	48-140
Chloroethane	10.0	10.0	100	66-126
Trichlorofluoromethane	9.54	10.0	95	69-129
Acetone	44.4	50.0	89	68-140
1,1-Dichloroethene	10.6	10.0	106	76-128
Carbon Disulfide	17.8	20.0	89	69-147
Methylene Chloride	8.83	10.0	88	75-119
trans-1,2-Dichloroethene	10.3	10.0	103	79-118
1,1-Dichloroethane	9.56	10.0	96	76-120
2-Butanone (MEK)	43.7	50.0	87	75-129
2,2-Dichloropropane	10.8	10.0	108	60-142
cis-1,2-Dichloroethene	10.2	10.0	102	81-119
Chloroform	9.87	10.0	99	80-120
Bromochloromethane	10.3	10.0	103	79-125
1,1,1-Trichloroethane (TCA)	10.6	10.0	106	80-127
1,1-Dichloropropene	9.41	10.0	94	79-128
Carbon Tetrachloride	11.3	10.0	113	76-137
1,2-Dichloroethane (EDC)	8.98	10.0	90	76-125
Benzene	9.38	10.0	94	87-122
Trichloroethene (TCE)	9.96	10.0	100	82-124
1,2-Dichloropropane	9.23	10.0	92	80-117
Bromodichloromethane	10.6	10.0	106	81-120
Dibromomethane	9.41	10.0	94	81-121
2-Hexanone	44.6	50.0	89	65-135
cis-1,3-Dichloropropene	10.4	10.0	104	82-126
Toluene	9.11	10.0	91	84-120
trans-1,3-Dichloropropene	10.1	10.0	101	76-116
1,1,2-Trichloroethane	9.87	10.0	99	80-120
4-Methyl-2-pentanone (MIBK)	44.7	50.0	89	69-134
1,3-Dichloropropane	9.93	10.0	99	82-119
Tetrachloroethene (PCE)	10.6	10.0	106	79-123
Dibromochloromethane	10.8	10.0	108	78-121

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	11/03/2004
Sample Matrix:	Water	**Date Analyzed:**	11/03/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0417577

	Lab Control Sample KWG0417577-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	10.5	10.0	105	78-121
Chlorobenzene	9.86	10.0	99	85-114
1,1,1,2-Tetrachloroethane	11.6	10.0	116	85-122
Ethylbenzene	10.7	10.0	107	89-124
m,p-Xylenes	21.9	20.0	110	89-126
o-Xylene	11.0	10.0	110	86-129
Styrene	11.0	10.0	110	90-130
Bromoform	12.0	10.0	120	80-126
Isopropylbenzene	10.0	10.0	100	76-127
1,1,2,2-Tetrachloroethane	8.98	10.0	90	66-127
1,2,3-Trichloropropane	9.10	10.0	91	76-125
Bromobenzene	10.4	10.0	104	84-121
n-Propylbenzene	10.6	10.0	106	83-134
2-Chlorotoluene	10.7	10.0	107	81-131
4-Chlorotoluene	10.3	10.0	103	80-129
1,3,5-Trimethylbenzene	11.4	10.0	114	85-131
tert-Butylbenzene	11.3	10.0	113	81-132
1,2,4-Trimethylbenzene	11.4	10.0	114	86-138
sec-Butylbenzene	11.5	10.0	115	82-137
1,3-Dichlorobenzene	9.74	10.0	97	85-119
4-Isopropyltoluene	11.1	10.0	111	78-131
1,4-Dichlorobenzene	9.58	10.0	96	83-116
n-Butylbenzene	10.9	10.0	109	73-138
1,2-Dichlorobenzene	9.33	10.0	93	82-117
1,2-Dibromo-3-chloropropane	10.8	10.0	108	66-123
1,2,4-Trichlorobenzene	9.71	10.0	97	74-136
1,2,3-Trichlorobenzene	10.2	10.0	102	72-137
Naphthalene	11.3	10.0	113	64-145
Hexachlorobutadiene	11.3	10.0	113	75-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408430
Date Extracted: 11/04/2004
Date Analyzed: 11/04/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0417645

	Lab Control Sample KWG0417645-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	9.47	10.0	95	52-179
Chloromethane	7.65	10.0	77	58-129
Vinyl Chloride	9.96	10.0	100	74-138
Bromomethane	11.5	10.0	115	48-140
Chloroethane	10.1	10.0	101	66-126
Trichlorofluoromethane	9.97	10.0	100	69-129
Acetone	45.5	50.0	91	68-140
1,1-Dichloroethene	10.6	10.0	106	76-128
Carbon Disulfide	17.8	20.0	89	69-147
Methylene Chloride	9.01	10.0	90	75-119
trans-1,2-Dichloroethene	10.2	10.0	102	79-118
1,1-Dichloroethane	9.46	10.0	95	76-120
2-Butanone (MEK)	46.0	50.0	92	75-129
2,2-Dichloropropane	10.9	10.0	109	60-142
cis-1,2-Dichloroethene	10.1	10.0	101	81-119
Chloroform	10.1	10.0	101	80-120
Bromochloromethane	10.3	10.0	103	79-125
1,1,1-Trichloroethane (TCA)	11.1	10.0	111	80-127
1,1-Dichloropropene	9.69	10.0	97	79-128
Carbon Tetrachloride	11.7	10.0	117	76-137
1,2-Dichloroethane (EDC)	9.13	10.0	91	76-125
Benzene	9.25	10.0	93	87-122
Trichloroethene (TCE)	9.99	10.0	100	82-124
1,2-Dichloropropane	9.05	10.0	91	80-117
Bromodichloromethane	10.6	10.0	106	81-120
Dibromomethane	9.52	10.0	95	81-121
2-Hexanone	44.9	50.0	90	65-135
cis-1,3-Dichloropropene	10.2	10.0	102	82-126
Toluene	9.12	10.0	91	84-120
trans-1,3-Dichloropropene	9.97	10.0	100	76-116
1,1,2-Trichloroethane	9.66	10.0	97	80-120
4-Methyl-2-pentanone (MIBK)	43.5	50.0	87	69-134
1,3-Dichloropropane	10.1	10.0	101	82-119
Tetrachloroethene (PCE)	10.7	10.0	107	79-123
Dibromochloromethane	11.0	10.0	110	78-121

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00081

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408430
Date Extracted: 11/04/2004
Date Analyzed: 11/04/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0417645

	Lab Control Sample KWG0417645-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	10.1	10.0	101	78-121
Chlorobenzene	9.90	10.0	99	85-114
1,1,1,2-Tetrachloroethane	11.6	10.0	116	85-122
Ethylbenzene	10.8	10.0	108	89-124
m,p-Xylenes	21.9	20.0	110	89-126
o-Xylene	10.5	10.0	105	86-129
Styrene	11.0	10.0	110	90-130
Bromoform	11.8	10.0	118	80-126
Isopropylbenzene	10.0	10.0	100	76-127
1,1,2,2-Tetrachloroethane	8.71	10.0	87	66-127
1,2,3-Trichloropropane	9.09	10.0	91	76-125
Bromobenzene	9.96	10.0	100	84-121
n-Propylbenzene	10.2	10.0	102	83-134
2-Chlorotoluene	10.4	10.0	104	81-131
4-Chlorotoluene	10.0	10.0	100	80-129
1,3,5-Trimethylbenzene	11.0	10.0	110	85-131
tert-Butylbenzene	10.8	10.0	108	81-132
1,2,4-Trimethylbenzene	11.1	10.0	111	86-138
sec-Butylbenzene	11.1	10.0	111	82-137
1,3-Dichlorobenzene	9.39	10.0	94	85-119
4-Isopropyltoluene	10.7	10.0	107	78-131
1,4-Dichlorobenzene	9.29	10.0	93	83-116
n-Butylbenzene	10.4	10.0	104	73-138
1,2-Dichlorobenzene	9.10	10.0	91	82-117
1,2-Dibromo-3-chloropropane	9.54	10.0	95	66-123
1,2,4-Trichlorobenzene	9.19	10.0	92	74-136
1,2,3-Trichlorobenzene	9.58	10.0	96	72-137
Naphthalene	10.1	10.0	101	64-145
Hexachlorobutadiene	11.4	10.0	114	75-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Semi-Volatile Organic Compounds
EPA Method 8270C

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102204-11 MW-5	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	ND	U	0.20	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.20	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.20	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	78	41-118	11/24/04	Acceptable
Nitrobenzene-d5	72	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	76	36-107	11/24/04	Acceptable
Terphenyl-d14	99	38-148	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102204-11	**Units:**	ug/L
Lab Code:	K2408430-001	**Basis:**	NA

Analyte	Comments
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102204-18 MW-15	**Units:**	ug/L
Lab Code:	K2408430-008	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	ND	U	0.20	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	**0.055**	J	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.20	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	**0.024**	J	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.20	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	77	41-118	11/24/04	Acceptable
Nitrobenzene-d5	76	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	74	36-107	11/24/04	Acceptable
Terphenyl-d14	97	38-148	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/22/2004
Sample Matrix:	Water	**Date Received:**	10/25/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102204-18	**Units:**	ug/L
Lab Code:	K2408430-008	**Basis:**	NA

Analyte	Comments
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0416820-3	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.19	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	ND	U	0.19	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.19	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	ND	U	0.19	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.19	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.19	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	ND	U	0.19	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.19	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.19	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.19	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.19	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.19	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.19	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.19	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.19	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.19	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	76	41-118	11/24/04	Acceptable
Nitrobenzene-d5	78	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	70	36-107	11/24/04	Acceptable
Terphenyl-d14	95	38-148	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0416820-3	**Basis:**	NA

Analyte	Comments
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

omments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408430

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
MO-102204-11	K2408430-001	78	72	76	99
MO-102204-18	K2408430-008	77	76	74	97
Method Blank	KWG0416820-3	76	78	70	95
Lab Control Sample	KWG0416820-1	83	82	71	88
Duplicate Lab Control Sample	KWG0416820-2	75	74	69	87

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	41-118
Sur2 = Nitrobenzene-d5	39-120
Sur3 = 2-Fluorobiphenyl	36-107
Sur4 = Terphenyl-d14	38-148

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408430
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	10/27/2004
Sample Matrix:	Water	**Date Analyzed:**	11/14/2004

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520	**Units:**	ug/L
Analysis Method:	8270C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0416820

	Lab Control Sample KWG0416820-1 **Lab Control Spike**			Duplicate Lab Control Sample KWG0416820-2 **Duplicate Lab Control Spike**					
\nalyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
‑Methylphenol	4.12	5.00	82	3.56	5.00	71	27-123	14	30
Naphthalene	3.51	5.00	70	3.24	5.00	65	27-116	8	30
!-Methylnaphthalene	3.27	5.00	65	3.06	5.00	61	22-106	6	30
\cenaphthylene	4.36	5.00	87	4.20	5.00	84	33-131	4	30
\cenaphthene	3.92	5.00	78	3.82	5.00	76	31-122	2	30
)ibenzofuran	4.00	5.00	80	3.86	5.00	77	31-119	4	30
luorene	4.19	5.00	84	4.10	5.00	82	33-120	2	30
'henanthrene	4.24	5.00	85	4.08	5.00	82	35-127	4	30
\nthracene	4.27	5.00	85	4.09	5.00	82	34-126	4	30
luoranthene	4.49	5.00	90	4.39	5.00	88	36-132	2	30
'yrene	4.21	5.00	84	4.11	5.00	82	38-129	2	30
3utyl Benzyl Phthalate	4.87	5.00	97	4.82	5.00	96	50-128	1	30
3enz(a)anthracene	4.35	5.00	87	4.17	5.00	83	39-128	4	30
:hrysene	4.62	5.00	92	4.52	5.00	90	40-128	2	30
)i-n-octyl Phthalate	5.08	5.00	102	4.82	5.00	96	47-134	5	30
lenzo(b)fluoranthene	4.43	5.00	89	4.28	5.00	86	36-135	4	30
lenzo(k)fluoranthene	4.49	5.00	90	4.38	5.00	88	38-133	2	30
lenzo(a)pyrene	4.41	5.00	88	4.14	5.00	83	35-129	6	30
ndeno(1,2,3-cd)pyrene	4.49	5.00	90	4.31	5.00	86	37-133	4	30
)ibenz(a,h)anthracene	4.66	5.00	93	4.38	5.00	88	38-135	6	30
;enzo(g,h,i)perylene	4.52	5.00	90	4.36	5.00	87	39-133	3	30

:sults flagged with an asterisk (*) indicate values outside control criteria.

:rcent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00091

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 3, 2004

Service Request No: K2408403

John Renda
Anchor Environmental
6650 SW Redwood Lane Suite 110
Portland, OR 97224

RE: McCall Oil and Chemical / 021062-02

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on October 22, 2004. For your reference, these analyses have been assigned our service request number K2408403.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281.

Respectfully submitted,

Columbia Analytical Services, Inc.

Abbie Spielman
Project Chemist

AS/jeb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Anchor Environmental	**Service Request No.:**	K2408403
Project:	McCall Oil	**Date Received:**	10/22/04
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Eleven water samples were received for analysis at Columbia Analytical Services on 10/22/04. Minor preservation discrepancies were noted upon initial sample inspection. Additional details about the exceptions are noted on the cooler receipt and preservation form included in this data package. These issues were resolved at the laboratory. All remaining samples were received in good condition and consistent with the accompanying chain of custody forms. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total and Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Fuel Identification and Quantification by EPA Method 8015B

Sample Notes and Discussion:
The Gasoline results are semi-quantitative. Results are expected to exhibit a low bias due to a potential loss of volatile compounds during the extraction process.

No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260B

Elevated Method Reporting Limits:
Sample MO-102104-4 required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL3940: tert-Butylbenzene, 1, 2, 4-Trimethylbenzene, sec-Butylbenzene, 4-Isopropyltoluene, and n-Butylbenzene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 11.0%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

No anomalies associated with the analysis of these samples were observed.

Approved by ami Apruh **Date** 10/3/04

Chain of Custody
Documentation

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

SR#: K2408403

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 1 COC #

00000

PROJECT NAME: McCall Oil
PROJECT NUMBER:
PROJECT MANAGER: JOHN RENDA
COMPANY/ADDRESS: ANCHOR ENV., PORTLAND, OR
CITY/STATE/ZIP:
E-MAIL ADDRESS: JRENDA@ANCHORENV.COM
PHONE#: 503-670-4108 FAX#: 670-1128
SAMPLER'S SIGNATURE: [signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☒ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☒	Metals, Total or Dissolved (See list below)	Cyanide☐ Hex-Chrom☐	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020☐ AOX 1650☐ 506☐	8015 FIQ	TOT. + DIS. As			REMARKS
MO-102104-1	10/21/04	0853		H2O	6		X													X	X			
- -2		1000			3															X	X			
- -3		1005			3															X	X			
- -4		1120			6		X													X	X			
- -5		1159			3															X	X			
- -6		1250			*6									X						X	X			
- -7		1350			4									X						X	X			
- -8		1500			7		X							X	X					X				
- -9		1600			7		X							X	X					X				
- -10		1700			7		X							X	X					X				
TRIP BLANK-1							X																	

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # ______

Bill To: ______

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard (10-15 working days)

___ Provide FAX Results

______ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al **As** Sb Ba Be B Ca Cd Co **Cr** **Cu** Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al **As** Sb Ba Be B Ca Cd Co **Cr** **Cu** Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* EXTRA bottles for QC (8015 + PAHs)

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature: [signature]	Date/Time: 10-22-04/0600	Signature: [signature]	Date/Time: 10/22/04 1500	Signature	Date/Time	Signature	Date/Time
Printed Name: T. Stone	Firm: ANCHOR-PDX	Printed Name	Firm: CAS	Printed Name	Firm	Printed Name	Firm

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC ABBIE

Project/Client Anchor-(McCall Oil) Work Order K240 8403

Cooler received on 10-22-04 and opened on 10-22-04 by BW

1.	Were custody seals on outside of coolers? If yes, how many and where? 1 Front	Y	N
2.	Were custody seals intact?	Y	N
3.	Were signature and date present on the custody seals?	Y	N
4.	Is the shipper's airbill available and filed? If no, record airbill number:	~~Y~~	~~N~~
5.	COC#		
	Temperature of cooler(s) upon receipt: (°C) 1.2		
	Temperature Blank: (°C) 1.0		
	Were samples hand delivered on the same day as collection?	~~Y~~	~~N~~
6.	Were custody papers properly filled out (ink, signed, etc.)?	Y	N
7.	Type of packing material present ICE, Water, foam inserts		
8.	**Did all bottles arrive in good condition (unbroken)?**	Y	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?	Y	N
10.	Did all bottle labels and tags agree with custody papers?	Y	N
11.	**Were the correct types of bottles used for the tests indicated?**	Y	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?	Y	N
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?	~~Y~~	~~N~~
14.	Did the bottles originate from CAS/K or a branch laboratory?	Y	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**	~~Y~~	~~N~~
16.	Was C12/Res negative?	~~Y~~	~~N~~

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials
MO 102104 1041	HNO_3	1ml	A26032	500ml		BW

pH corrected 10/22/04 BW

Metals

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: McCall Oil

Service Request: K2408403

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Sample No.	Lab Sample ID.
MO-102104-1	K2408403-001
MO-102104-1	K2408403-001 DISS
MO-102104-2	K2408403-002
MO-102104-2	K2408403-002 DISS
MO-102104-3	K2408403-003
MO-102104-3	K2408403-003 DISS
MO-102104-4	K2408403-004
MO-102104-4	K2408403-004 DISS
MO-102104-5	K2408403-005
MO-102104-5	K2408403-005 DISS
MO-102104-6	K2408403-006
MO-102104-6 DISS	K2408403-006 DISS
MO-102104-6D	K2408403-006D
MO-102104-6 DISSD	K2408403-006D DISS
MO-102104-6S	K2408403-006S
MO-102104-6 DISSS	K2408403-006S DISS
MO-102104-7	K2408403-007
MO-102104-7	K2408403-007 DISS
MO-102104-8	K2408403-008
MO-102104-8	K2408403-008 DISS
MO-102104-9	K2408403-009
MO-102104-9	K2408403-009 DISS
MO-102104-10	K2408403-010

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Total and Dissolved Metals

Signature: [signature]

Date: 12/3/04

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: McCall Oil

Service Request: K2408403

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Sample No.	Lab Sample ID.
MO-102104-10	K2408403-010 DISS
Method Blank	K2408403-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Total and Dissolved Metals

Signature: ____________________ Date: ____________________

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-1 MW-10 **Lab Code:** K2408403-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	32.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-1 MW-10

Lab Code: K2408403-001 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	34.2		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	McCall Oil	Service Request:	K2408403
Project No.:	021062-02	Date Collected:	10/21/04
Project Name:	McCall Oil and Chemical	Date Received:	10/22/04
Matrix:	WATER	Units:	µG/L
		Basis:	NA

Sample Name: MO-102104-2 EX-7 Lab Code: K2408403-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.6		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-2 EX-7 Lab Code: K2408403-002 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.5	U	

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-3 EX-7

Lab Code: K2408403-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.5	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-3 EX-1

Lab Code: K2408403-003 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.5	U	

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-4 MW-6

Lab Code: K2408403-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	22.4		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-4 MW-6

Lab Code: K2408403-004 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	23.1		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	McCall Oil	**Service Request:**	K2408403
Project No.:	021062-02	**Date Collected:**	10/21/04
Project Name:	McCall Oil and Chemical	**Date Received:**	10/22/04
Matrix:	WATER	**Units:**	µG/L
		Basis:	NA

Sample Name: MO-102104-5 MW-12 **Lab Code:** K2408403-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	27.4		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-5 MW-12

Lab Code: K2408403-005 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	28.2		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-6 EX-2 Lab Code: K2408403-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	64.6		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-6 DISS EX-2   Lab Code: K2408403-006 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	72.4		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-7 Ex-3 **Lab Code:** K2408403-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	90.0		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-7 EX-7

Lab Code: K2408403-007 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	90.2		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-8 MW-8 Lab Code: K2408403-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	10.1		
Chromium	200.8	0.2	1	11/13/04	11/29/04	3.1		
Copper	200.8	0.1	1	11/13/04	11/29/04	3.8		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-8 MW-8

Lab Code: K2408403-008 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	10.3		
Chromium	200.8	0.2	1	11/13/04	11/29/04	1.0		
Copper	200.8	0.1	1	11/13/04	11/29/04	0.1	U	

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Matrix: WATER

Service Request: K2408403

Date Collected: 10/21/04

Date Received: 10/22/04

Units: µG/L

Basis: NA

Sample Name: MO-102104-9 MW-7

Lab Code: K2408403-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	5.1		
Chromium	200.8	0.2	1	11/13/04	11/29/04	1.1		
Copper	200.8	0.1	1	11/13/04	11/29/04	0.1	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-9 MW-17

Lab Code: K2408403-009 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	6.3		
Chromium	200.8	0.2	1	11/13/04	11/29/04	1.1		
Copper	200.8	0.1	1	11/13/04	11/29/04	0.1	U	

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Matrix: WATER

Service Request: K2408403

Date Collected: 10/21/04

Date Received: 10/22/04

Units: µG/L

Basis: NA

Sample Name: MO-102104-10 MW-14

Lab Code: K2408403-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	2.7		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.6		
Copper	200.8	0.1	1	11/13/04	11/29/04	2.4		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected: 10/21/04
Date Received: 10/22/04
Units: µG/L
Basis: NA

Sample Name: MO-102104-10 MW-14 Lab Code: K2408403-010 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	1.5		
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.5		
Copper	200.8	0.1	1	11/13/04	11/29/04	2.1		

% Solids: 0.0

Comments: Dissolved Metals

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank   Lab Code: K2408403-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	11/13/04	11/29/04	0.5	U	
Chromium	200.8	0.2	1	11/13/04	11/29/04	0.2	U	
Copper	200.8	0.1	1	11/13/04	11/29/04	0.1	U	

% Solids: 0.0

Comments:

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: MO-102104-6 DISSS Lab Code: K2408403-006S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	87.9		72.4		20.0	78		200.8
Chromium	70 - 130	21.9		1.0		20.0	105		200.8
Copper	70 - 130	18.4		0.1	U	20.0	92		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Matrix: WATER

Service Request: K2408403

Units: µg/L

Basis: NA

% Solids: 0.0

Sample Name: MO-102104-6S

Lab Code: K2408403-006S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	85.3		64.6		20.0	104		200.8
Chromium	70 - 130	21.9		1.0		20.0	105		200.8
Copper	70 - 130	18.5		0.1	U	20.0	93		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-6-
DUPLICATES

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil and Chemical
Matrix: WATER

Service Request: K2408403
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name:MO-102104-6 DISSD

Lab Code: K2408403-006D DISS

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	20	72.4		73.1		1		200.8
Chromium		1.0		1.0		2		200.8
Copper		0.1	U	0.1	U			200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-6-
DUPLICATES

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Matrix: WATER

Service Request: K2408403

Units: µg/L

Basis: NA

% Solids: 0.0

Sample Name: MO-102104-6D

Lab Code: K2408403-006D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	20	64.6		64.7		0		200.8
Chromium		1.0		0.9		4		200.8
Copper		0.1	U	0.1	U			200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: McCall Oil

Service Request: K2408403

Project No.: 021062-02

Project Name: McCall Oil and Chemical

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

	Aqueous ug/L			Solid (mg/kg)				
Analyte	True	Found	%R	True	Found	C	Limits	%R
Arsenic	20.0	20.1	101					
Chromium	20.0	20.1	101					
Copper	20.0	20.2	101					

Fuel Identification Quantification
EPA Method 8015

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-1 MW-10	**Units:**	ug/L
Lab Code:	K2408403-001	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**650**	**Y**	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**310**	**L**	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	66	42-124	11/03/04	Acceptable
o-Terphenyl	87	37-141	11/03/04	Acceptable
n-Triacontane	90	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-2	**Units:**	ug/L
Lab Code:	K2408403-002 EX-7	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	72	42-124	11/03/04	Acceptable
o-Terphenyl	83	37-141	11/03/04	Acceptable
n-Triacontane	87	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-3 Ex-7 dup	**Units:**	ug/L
Lab Code:	K2408403-003	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**270**	**O**	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	82	42-124	11/03/04	Acceptable
o-Terphenyl	87	37-141	11/03/04	Acceptable
n-Triacontane	90	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-4	**Units:**	ug/L
Lab Code:	K2408403-004	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

MW-6

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**210**	**Y**	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	80	42-124	11/03/04	Acceptable
o-Terphenyl	83	37-141	11/03/04	Acceptable
n-Triacontane	86	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-5 MW-12	**Units:**	ug/L
Lab Code:	K2408403-005	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**360**	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**410**	O	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	84	42-124	11/03/04	Acceptable
o-Terphenyl	87	37-141	11/03/04	Acceptable
n-Triacontane	90	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-6 Et-2	**Units:**	ug/L
Lab Code:	K2408403-006	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**160**	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	87	42-124	11/03/04	Acceptable
o-Terphenyl	88	37-141	11/03/04	Acceptable
n-Triacontane	91	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-7 EX-3	**Units:**	ug/L
Lab Code:	K2408403-007	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	59	42-124	11/03/04	Acceptable
o-Terphenyl	79	37-141	11/03/04	Acceptable
n-Triacontane	81	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403
Date Collected: 10/21/2004
Date Received: 10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name: MO-102104-8 MW-8
Lab Code: K2408403-008

Units: ug/L
Basis: NA

Extraction Method: EPA 3510C
Analysis Method: 8015M

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**1300**	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**830**	O	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	73	42-124	11/03/04	Acceptable
o-Terphenyl	85	37-141	11/03/04	Acceptable
n-Triacontane	89	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-9 MW-7	**Units:**	ug/L
Lab Code:	K2408403-009	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**430**	**Y**	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	59	42-124	11/03/04	Acceptable
o-Terphenyl	79	37-141	11/03/04	Acceptable
n-Triacontane	84	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-10 MW-14	**Units:**	ug/L
Lab Code:	K2408403-010	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	**430**	Y	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	**280**	L	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	80	42-124	11/03/04	Acceptable
o-Terphenyl	82	37-141	11/03/04	Acceptable
n-Triacontane	84	50-150	11/03/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0416862-6	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Diesel Range Organics (DRO)	ND	U	100	1	10/28/04	11/03/04	KWG0416862	
Residual Range Organics (RRO)	ND	U	250	1	10/28/04	11/03/04	KWG0416862	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	86	42-124	11/03/04	Acceptable
o-Terphenyl	93	37-141	11/03/04	Acceptable
n-Triacontane	97	50-150	11/03/04	Acceptable

Comments:

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403

Surrogate Recovery Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method: EPA 3510C
Analysis Method: 8015M

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MO-102104-1	K2408403-001	66	87	90
MO-102104-2	K2408403-002	72	83	87
MO-102104-3	K2408403-003	82	87	90
MO-102104-4	K2408403-004	80	83	86
MO-102104-5	K2408403-005	84	87	90
MO-102104-6	K2408403-006	87	88	91
MO-102104-7	K2408403-007	59	79	81
MO-102104-8	K2408403-008	73	85	89
MO-102104-9	K2408403-009	59	79	84
MO-102104-10	K2408403-010	80	82	84
Method Blank	KWG0416862-6	86	93	97
MO-102104-6MS	KWG0416862-1	56	84	91
Lab Control Sample	KWG0416862-5	83	87	91
Duplicate Lab Control Sample	KWG0416862-7	87	88	91

Surrogate Recovery Control Limits (%)

Sur1 =	4-Bromofluorobenzene	42-124
Sur2 =	o-Terphenyl	37-141
Sur3 =	n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	10/28/2004
Sample Matrix:	Water	**Date Analyzed:**	11/03/2004

Matrix Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-102104-6	**Units:**	ug/L
Lab Code:	K2408403-006	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	8015M	**Extraction Lot:**	KWG0416862

		MO-102104-6MS KWG0416862-1 Matrix Spike			
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Diesel Range Organics (DRO)	160	3240	3200	96	54-161
Residual Range Organics (RRO)	ND	1780	1600	112	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403
Date Extracted: 10/28/2004
Date Analyzed: 11/03/2004

Lab Control Spike/Duplicate Lab Control Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method: EPA 3510C
Analysis Method: 8015M

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0416862

	Lab Control Sample KWG0416862-5 **Lab Control Spike**			Duplicate Lab Control Sample KWG0416862-7 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	3800	3200	119	3780	3200	118	71-146	0	30
Residual Range Organics (RRO)	1740	1600	109	1710	1600	107	53-143	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Volatile Organic Compounds
EPA Method 8260B

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-1 MW-10	**Units:**	ug/L
Lab Code:	K2408403-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Chloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Vinyl Chloride	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromomethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Chloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Trichlorofluoromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Acetone	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
1,1-Dichloroethene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Carbon Disulfide	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Methylene Chloride	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1-Dichloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
2-Butanone (MEK)	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
2,2-Dichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
cis-1,2-Dichloroethene	**0.69**		0.50	1	11/01/04	11/01/04	KWG0417360	
Chloroform	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromochloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1-Dichloropropene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Carbon Tetrachloride	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Benzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Trichloroethene (TCE)	**1.7**		0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromodichloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Dibromomethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
2-Hexanone	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Toluene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
1,3-Dichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-1 MW-10	**Units:**	ug/L
Lab Code:	K2408403-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Dibromochloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
Chlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Ethylbenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
m,p-Xylenes	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
o-Xylene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Styrene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromoform	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Isopropylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromobenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
n-Propylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
2-Chlorotoluene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
4-Chlorotoluene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
tert-Butylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
sec-Butylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
4-Isopropyltoluene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
n-Butylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
Naphthalene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
Hexachlorobutadiene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-1	**Units:**	ug/L
Lab Code:	K2408403-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	11/01/04	Acceptable
Toluene-d8	96	86-114	11/01/04	Acceptable
4-Bromofluorobenzene	98	72-115	11/01/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-4 MW-6	**Units:**	ug/L
Lab Code:	K2408403-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Chloromethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Vinyl Chloride	14	D	2.5	5	11/02/04	11/02/04	KWG0417360	
Bromomethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Chloroethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Trichlorofluoromethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Acetone	ND	U	100	5	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethene	3.4	D	2.5	5	11/02/04	11/02/04	KWG0417360	
Carbon Disulfide	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Methylene Chloride	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
trans-1,2-Dichloroethene	4.4	D	2.5	5	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethane	3.8	D	2.5	5	11/02/04	11/02/04	KWG0417360	
2-Butanone (MEK)	ND	U	100	5	11/02/04	11/02/04	KWG0417360	
2,2-Dichloropropane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
cis-1,2-Dichloroethene	780	D	25	50	11/02/04	11/02/04	KWG0417360	
Chloroform	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Bromochloromethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	6.4	D	2.5	5	11/02/04	11/02/04	KWG0417360	
1,1-Dichloropropene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Carbon Tetrachloride	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Benzene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Trichloroethene (TCE)	55	D	2.5	5	11/02/04	11/02/04	KWG0417360	
1,2-Dichloropropane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Bromodichloromethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Dibromomethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
2-Hexanone	ND	U	100	5	11/02/04	11/02/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Toluene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	100	5	11/02/04	11/02/04	KWG0417360	
1,3-Dichloropropane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-4 MW-6	**Units:**	ug/L
Lab Code:	K2408403-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	62	D	2.5	5	11/02/04	11/02/04	KWG0417360	
Dibromochloromethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
Chlorobenzene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Ethylbenzene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
m,p-Xylenes	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
o-Xylene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Styrene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Bromoform	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Isopropylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
Bromobenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
n-Propylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
2-Chlorotoluene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
4-Chlorotoluene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
tert-Butylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
sec-Butylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
4-Isopropyltoluene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
n-Butylbenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	2.5	5	11/02/04	11/02/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
Naphthalene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	
Hexachlorobutadiene	ND	U	10	5	11/02/04	11/02/04	KWG0417360	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-4	**Units:**	ug/L
Lab Code:	K2408403-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	11/02/04	Acceptable
Toluene-d8	98	86-114	11/02/04	Acceptable
4-Bromofluorobenzene	97	72-115	11/02/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-8 MW-8	**Units:**	ug/L
Lab Code:	K2408403-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Vinyl Chloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichlorofluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Acetone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Disulfide	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Methylene Chloride	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Butanone (MEK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
2,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
cis-1,2-Dichloroethene	**1.2**		0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Tetrachloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Benzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichloroethene (TCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromodichloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Hexanone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Toluene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-8 MW-8	**Units:**	ug/L
Lab Code:	K2408403-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Chlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Ethylbenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
m,p-Xylenes	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
o-Xylene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Styrene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromoform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Isopropylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
n-Propylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
2-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
4-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
tert-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
sec-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Isopropyltoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
n-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Naphthalene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Hexachlorobutadiene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-8	**Units:**	ug/L
Lab Code:	K2408403-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	11/02/04	Acceptable
Toluene-d8	98	86-114	11/02/04	Acceptable
4-Bromofluorobenzene	100	72-115	11/02/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403
Date Collected: 10/21/2004
Date Received: 10/22/2004

Volatile Organic Compounds

Sample Name: MO-102104-9 MW-7
Lab Code: K2408403-009
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Vinyl Chloride	**0.78**		0.50	1	11/02/04	11/02/04	KWG0417360	
Bromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichlorofluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Acetone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Disulfide	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Methylene Chloride	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Butanone (MEK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
2,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
cis-1,2-Dichloroethene	**3.2**		0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Tetrachloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Benzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichloroethene (TCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromodichloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Hexanone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Toluene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-9 MW-7	**Units:**	ug/L
Lab Code:	K2408403-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Chlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Ethylbenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
m,p-Xylenes	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
o-Xylene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Styrene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromoform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Isopropylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
n-Propylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
2-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
4-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
tert-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
sec-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Isopropyltoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
n-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Naphthalene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Hexachlorobutadiene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-9	**Units:**	ug/L
Lab Code:	K2408403-009	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	11/02/04	Acceptable
Toluene-d8	98	86-114	11/02/04	Acceptable
4-Bromofluorobenzene	100	72-115	11/02/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-10 MW-14	**Units:**	ug/L
Lab Code:	K2408403-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Vinyl Chloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichlorofluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Acetone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Disulfide	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Methylene Chloride	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Butanone (MEK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
2,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
cis-1,2-Dichloroethene	**1.0**		0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Tetrachloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Benzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichloroethene (TCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromodichloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Hexanone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Toluene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-10 MW-14	**Units:**	ug/L
Lab Code:	K2408403-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Chlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Ethylbenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
m,p-Xylenes	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
o-Xylene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Styrene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromoform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Isopropylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
n-Propylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
2-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
4-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
tert-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
sec-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Isopropyltoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
n-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Naphthalene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Hexachlorobutadiene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	

Comments: ______________________________

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	MO-102104-10	**Units:**	ug/L
Lab Code:	K2408403-010	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	11/02/04	Acceptable
Toluene-d8	96	86-114	11/02/04	Acceptable
4-Bromofluorobenzene	99	72-115	11/02/04	Acceptable

Comments:

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	Trip Blanks	**Units:**	ug/L
Lab Code:	K2408403-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Vinyl Chloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichlorofluoromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Acetone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Disulfide	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Methylene Chloride	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Butanone (MEK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
2,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Chloroform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Carbon Tetrachloride	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Benzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Trichloroethene (TCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromodichloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromomethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
2-Hexanone	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Toluene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	Trip Blanks	**Units:**	ug/L
Lab Code:	K2408403-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Dibromochloromethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Chlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Ethylbenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
m,p-Xylenes	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
o-Xylene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Styrene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromoform	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Isopropylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
Bromobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
n-Propylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
2-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
4-Chlorotoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
tert-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
sec-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
4-Isopropyltoluene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
n-Butylbenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	0.50	1	11/02/04	11/02/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Naphthalene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	
Hexachlorobutadiene	ND	U	2.0	1	11/02/04	11/02/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Volatile Organic Compounds

Sample Name:	Trip Blanks	**Units:**	ug/L
Lab Code:	K2408403-011	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	11/02/04	Acceptable
Toluene-d8	98	86-114	11/02/04	Acceptable
4-Bromofluorobenzene	97	72-115	11/02/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417360-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Chloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Vinyl Chloride	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromomethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Chloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Trichlorofluoromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Acetone	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
1,1-Dichloroethene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Carbon Disulfide	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Methylene Chloride	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
trans-1,2-Dichloroethene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1-Dichloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
2-Butanone (MEK)	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
2,2-Dichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
cis-1,2-Dichloroethene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Chloroform	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromochloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1-Dichloropropene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Carbon Tetrachloride	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Benzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Trichloroethene (TCE)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromodichloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Dibromomethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
2-Hexanone	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
cis-1,3-Dichloropropene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Toluene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
trans-1,3-Dichloropropene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1,2-Trichloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/01/04	11/01/04	KWG0417360	
1,3-Dichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417360-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Dibromochloromethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
Chlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Ethylbenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
m,p-Xylenes	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
o-Xylene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Styrene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromoform	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Isopropylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2,3-Trichloropropane	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
Bromobenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
n-Propylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
2-Chlorotoluene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
4-Chlorotoluene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,3,5-Trimethylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
tert-Butylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2,4-Trimethylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
sec-Butylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,3-Dichlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
4-Isopropyltoluene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,4-Dichlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
n-Butylbenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2-Dichlorobenzene	ND	U	0.50	1	11/01/04	11/01/04	KWG0417360	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2,4-Trichlorobenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
1,2,3-Trichlorobenzene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
Naphthalene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	
Hexachlorobutadiene	ND	U	2.0	1	11/01/04	11/01/04	KWG0417360	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0417360-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	11/01/04	Acceptable
Toluene-d8	100	86-114	11/01/04	Acceptable
4-Bromofluorobenzene	98	72-115	11/01/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MO-102104-1	K2408403-001	94	96	98
MO-102104-4	K2408403-004	96	98	97
MO-102104-8	K2408403-008	95	98	100
MO-102104-9	K2408403-009	96	98	100
MO-102104-10	K2408403-010	95	96	99
Trip Blanks	K2408403-011	96	98	97
Method Blank	KWG0417360-4	97	100	98
MO-102104-4MS	KWG0417360-1	98	99	101
MO-102104-4DMS	KWG0417360-2	96	100	100
Lab Control Sample	KWG0417360-3	96	101	102

Surrogate Recovery Control Limits (%)

Sur1 =	Dibromofluoromethane	85-115
Sur2 =	Toluene-d8	86-114
Sur3 =	4-Bromofluorobenzene	72-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	11/02/2004
Sample Matrix:	Water	**Date Analyzed:**	11/02/2004

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	MO-102104-4	**Units:**	ug/L
Lab Code:	K2408403-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B	**Extraction Lot:**	KWG0417360

		MO-102104-4MS KWG0417360-1 Matrix Spike			MO-102104-4DMS KWG0417360-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	3.4	538	500	107	536	500	106	66-147	0	30
Benzene	ND	493	500	99	497	500	99	81-130	1	30
Trichloroethene (TCE)	55	556	500	100	550	500	99	63-138	1	30
Toluene	ND	479	500	96	488	500	98	76-130	2	30
Chlorobenzene	ND	460	500	92	451	500	90	77-123	2	30
1,2-Dichlorobenzene	ND	463	500	93	504	500	101	73-125	9	30
Naphthalene	ND	464	500	93	496	500	99	54-160	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	11/01/2004
Sample Matrix:	Water	**Date Analyzed:**	11/01/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0417360

	Lab Control Sample KWG0417360-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	10.7	10.0	107	52-179
Chloromethane	9.84	10.0	98	58-129
Vinyl Chloride	9.85	10.0	99	74-138
Bromomethane	11.2	10.0	112	48-140
Chloroethane	9.78	10.0	98	66-126
Trichlorofluoromethane	8.60	10.0	86	69-129
Acetone	50.0	50.0	100	68-140
1,1-Dichloroethene	10.5	10.0	105	76-128
Carbon Disulfide	17.3	20.0	87	69-147
Methylene Chloride	9.56	10.0	96	75-119
trans-1,2-Dichloroethene	10.1	10.0	101	79-118
1,1-Dichloroethane	9.41	10.0	94	76-120
2-Butanone (MEK)	48.3	50.0	97	75-129
2,2-Dichloropropane	11.0	10.0	110	60-142
cis-1,2-Dichloroethene	10.2	10.0	102	81-119
Chloroform	9.38	10.0	94	80-120
Bromochloromethane	9.45	10.0	95	79-125
1,1,1-Trichloroethane (TCA)	9.85	10.0	99	80-127
1,1-Dichloropropene	9.95	10.0	100	79-128
Carbon Tetrachloride	10.2	10.0	102	76-137
1,2-Dichloroethane (EDC)	9.35	10.0	94	76-125
Benzene	9.86	10.0	99	87-122
Trichloroethene (TCE)	9.97	10.0	100	82-124
1,2-Dichloropropane	9.36	10.0	94	80-117
Bromodichloromethane	9.89	10.0	99	81-120
Dibromomethane	9.55	10.0	96	81-121
2-Hexanone	50.4	50.0	101	65-135
cis-1,3-Dichloropropene	10.8	10.0	108	82-126
Toluene	9.70	10.0	97	84-120
trans-1,3-Dichloropropene	9.66	10.0	97	76-116
1,1,2-Trichloroethane	9.91	10.0	99	80-120
4-Methyl-2-pentanone (MIBK)	51.1	50.0	102	69-134
1,3-Dichloropropane	10.2	10.0	102	82-119
Tetrachloroethene (PCE)	9.83	10.0	98	79-123
Dibromochloromethane	9.76	10.0	98	78-121

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	11/01/2004
Sample Matrix:	Water	**Date Analyzed:**	11/01/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0417360

	Lab Control Sample KWG0417360-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	9.55	10.0	96	78-121
Chlorobenzene	9.21	10.0	92	85-114
1,1,1,2-Tetrachloroethane	9.86	10.0	99	85-122
Ethylbenzene	10.1	10.0	101	89-124
m,p-Xylenes	20.2	20.0	101	89-126
o-Xylene	10.7	10.0	107	86-129
Styrene	10.5	10.0	105	90-130
Bromoform	10.2	10.0	102	80-126
Isopropylbenzene	9.19	10.0	92	76-127
1,1,2,2-Tetrachloroethane	10.3	10.0	103	66-127
1,2,3-Trichloropropane	10.3	10.0	103	76-125
Bromobenzene	10.5	10.0	105	84-121
n-Propylbenzene	9.97	10.0	100	83-134
2-Chlorotoluene	10.7	10.0	107	81-131
4-Chlorotoluene	9.84	10.0	98	80-129
1,3,5-Trimethylbenzene	10.2	10.0	102	85-131
tert-Butylbenzene	9.84	10.0	98	81-132
1,2,4-Trimethylbenzene	9.54	10.0	95	86-138
sec-Butylbenzene	9.54	10.0	95	82-137
1,3-Dichlorobenzene	10.2	10.0	102	85-119
4-Isopropyltoluene	9.30	10.0	93	78-131
1,4-Dichlorobenzene	9.17	10.0	92	83-116
n-Butylbenzene	9.73	10.0	97	73-138
1,2-Dichlorobenzene	9.98	10.0	100	82-117
1,2-Dibromo-3-chloropropane	10.7	10.0	107	66-123
1,2,4-Trichlorobenzene	10.7	10.0	107	74-136
1,2,3-Trichlorobenzene	10.6	10.0	106	72-137
Naphthalene	10.1	10.0	101	64-145
Hexachlorobutadiene	9.67	10.0	97	75-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Semi-Volatile Organic Compounds
EPA Method 8270C

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-6	**Units:**	ug/L
Lab Code:	K2408403-006	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	**0.037**	J	0.20	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	**0.021**	J	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.20	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	**0.032**	J	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.20	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	73	41-118	11/24/04	Acceptable
Nitrobenzene-d5	64	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	75	36-107	11/24/04	Acceptable
Terphenyl-d14	99	38-148	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-6	**Units:**	ug/L
Lab Code:	K2408403-006	**Basis:**	NA

Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

00081

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-7 Ex-3	**Units:**	ug/L
Lab Code:	K2408403-007	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.19	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	ND	U	0.19	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.19	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	**0.016**	J	0.19	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.19	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.19	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	**0.030**	J	0.19	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.19	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.19	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.19	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.19	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.19	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.19	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.19	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.19	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.19	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	80	41-118	11/24/04	Acceptable
Nitrobenzene-d5	84	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	78	36-107	11/24/04	Acceptable
Terphenyl-d14	92	38-148	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-7	**Units:**	ug/L
Lab Code:	K2408403-007	**Basis:**	NA

Analyte Comments	
-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

omments:

00083

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-8 MW-8	**Units:**	ug/L
Lab Code:	K2408403-008	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	**0.019**	J	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	**0.21**		0.20	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	**0.22**		0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	**0.22**		0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	**0.048**	J	0.20	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	**0.079**	J	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.20	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	78	41-118	11/24/04	Acceptable
Nitrobenzene-d5	76	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	78	36-107	11/24/04	Acceptable
Terphenyl-d14	50	38-148	11/24/04	Acceptable

Comments:

00084

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-8	**Units:**	ug/L
Lab Code:	K2408403-008	**Basis:**	NA

Analyte	Comments
l-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

omments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-9 MW-7	**Units:**	ug/L
Lab Code:	K2408403-009	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	**0.032**	J	0.20	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.20	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.20	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	74	41-118	11/24/04	Acceptable
Nitrobenzene-d5	63	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	75	36-107	11/24/04	Acceptable
Terphenyl-d14	99	38-148	11/24/04	Acceptable

Comments: ____________________

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-9	**Units:**	ug/L
Lab Code:	K2408403-009	**Basis:**	NA

Analyte Comments

-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

00087

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403
Date Collected: 10/21/2004
Date Received: 10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name: MO-102104-10 MW-14
Lab Code: K2408403-010

Units: ug/L
Basis: NA

Extraction Method: EPA 3520
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	ND	U	0.20	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	ND	U	0.20	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.20	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	ND	U	0.20	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.20	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.20	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.20	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.20	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.20	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.20	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.20	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.20	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.20	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	77	41-118	11/24/04	Acceptable
Nitrobenzene-d5	78	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	76	36-107	11/24/04	Acceptable
Terphenyl-d14	99	38-148	11/24/04	Acceptable

Comments:

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	10/21/2004
Sample Matrix:	Water	**Date Received:**	10/22/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-102104-10	**Units:**	ug/L
Lab Code:	K2408403-010	**Basis:**	NA

Analyte Comments	
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0416820-3	**Basis:**	NA
Extraction Method:	EPA 3520	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	0.48	0.051	1	10/27/04	11/24/04	KWG0416820	
Naphthalene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
2-Methylnaphthalene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Acenaphthylene	ND	U	0.19	0.011	1	10/27/04	11/24/04	KWG0416820	
Acenaphthene	ND	U	0.19	0.0088	1	10/27/04	11/24/04	KWG0416820	
Dibenzofuran	ND	U	0.19	0.014	1	10/27/04	11/24/04	KWG0416820	
Fluorene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Phenanthrene	ND	U	0.19	0.011	1	10/27/04	11/24/04	KWG0416820	
Anthracene	ND	U	0.19	0.015	1	10/27/04	11/24/04	KWG0416820	
Fluoranthene	ND	U	0.19	0.013	1	10/27/04	11/24/04	KWG0416820	
Pyrene	ND	U	0.19	0.015	1	10/27/04	11/24/04	KWG0416820	
Butyl Benzyl Phthalate	ND	U	0.19	0.026	1	10/27/04	11/24/04	KWG0416820	
Benz(a)anthracene	ND	U	0.19	0.012	1	10/27/04	11/24/04	KWG0416820	
Chrysene	ND	U	0.19	0.014	1	10/27/04	11/24/04	KWG0416820	
Di-n-octyl Phthalate	ND	U	0.19	0.032	1	10/27/04	11/24/04	KWG0416820	
Benzo(b)fluoranthene	ND	U	0.19	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(k)fluoranthene	ND	U	0.19	0.020	1	10/27/04	11/24/04	KWG0416820	
Benzo(a)pyrene	ND	U	0.19	0.016	1	10/27/04	11/24/04	KWG0416820	
Indeno(1,2,3-cd)pyrene	ND	U	0.19	0.024	1	10/27/04	11/24/04	KWG0416820	
Dibenz(a,h)anthracene	ND	U	0.19	0.031	1	10/27/04	11/24/04	KWG0416820	
Benzo(g,h,i)perylene	ND	U	0.19	0.017	1	10/27/04	11/24/04	KWG0416820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	76	41-118	11/24/04	Acceptable
Nitrobenzene-d5	78	39-120	11/24/04	Acceptable
2-Fluorobiphenyl	70	36-107	11/24/04	Acceptable
Terphenyl-d14	95	38-148	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	Service Request:	K2408403
Project:	McCall Oil and Chemical/021062-02	Date Collected:	NA
Sample Matrix:	Water	Date Received:	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	Units:	ug/L
Lab Code:	KWG0416820-3	Basis:	NA

Analyte	Comments
-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

omments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil and Chemical/021062-02
Sample Matrix: Water

Service Request: K2408403

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
MO-102104-6	K2408403-006	73	64	75	99
MO-102104-7	K2408403-007	80	84	78	92
MO-102104-8	K2408403-008	78	76	78	50
MO-102104-9	K2408403-009	74	63	75	99
MO-102104-10	K2408403-010	77	78	76	99
Method Blank	KWG0416820-3	76	78	70	95
Lab Control Sample	KWG0416820-1	83	82	71	88
Duplicate Lab Control Sample	KWG0416820-2	75	74	69	87

Surrogate Recovery Control Limits (%)

Sur1 =	Phenol-d6	41-118
Sur2 =	Nitrobenzene-d5	39-120
Sur3 =	2-Fluorobiphenyl	36-107
Sur4 =	Terphenyl-d14	38-148

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408403
Project:	McCall Oil and Chemical/021062-02	**Date Extracted:**	10/27/2004
Sample Matrix:	Water	**Date Analyzed:**	11/14/2004

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520	**Units:**	ug/L
Analysis Method:	8270C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0416820

	Lab Control Sample KWG0416820-1 Lab Control Spike			Duplicate Lab Control Sample KWG0416820-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
-Methylphenol	4.12	5.00	82	3.56	5.00	71	27-123	14	30
Naphthalene	3.51	5.00	70	3.24	5.00	65	27-116	8	30
-Methylnaphthalene	3.27	5.00	65	3.06	5.00	61	22-106	6	30
Acenaphthylene	4.36	5.00	87	4.20	5.00	84	33-131	4	30
Acenaphthene	3.92	5.00	78	3.82	5.00	76	31-122	2	30
Dibenzofuran	4.00	5.00	80	3.86	5.00	77	31-119	4	30
Fluorene	4.19	5.00	84	4.10	5.00	82	33-120	2	30
Phenanthrene	4.24	5.00	85	4.08	5.00	82	35-127	4	30
Anthracene	4.27	5.00	85	4.09	5.00	82	34-126	4	30
Fluoranthene	4.49	5.00	90	4.39	5.00	88	36-132	2	30
Pyrene	4.21	5.00	84	4.11	5.00	82	38-129	2	30
Butyl Benzyl Phthalate	4.87	5.00	97	4.82	5.00	96	50-128	1	30
Benz(a)anthracene	4.35	5.00	87	4.17	5.00	83	39-128	4	30
Chrysene	4.62	5.00	92	4.52	5.00	90	40-128	2	30
Di-n-octyl Phthalate	5.08	5.00	102	4.82	5.00	96	47-134	5	30
Benzo(b)fluoranthene	4.43	5.00	89	4.28	5.00	86	36-135	4	30
Benzo(k)fluoranthene	4.49	5.00	90	4.38	5.00	88	38-133	2	30
Benzo(a)pyrene	4.41	5.00	88	4.14	5.00	83	35-129	6	30
Indeno(1,2,3-cd)pyrene	4.49	5.00	90	4.31	5.00	86	37-133	4	30
Dibenz(a,h)anthracene	4.66	5.00	93	4.38	5.00	88	38-135	6	30
Benzo(g,h,i)perylene	4.52	5.00	90	4.36	5.00	87	39-133	3	30

sults flagged with an asterisk (*) indicate values outside control criteria.

rcent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 27, 2004 Service Request No: K2408877

John Renda
Anchor Environmental
6650 SW Redwood Lane Suite 110
Portland, OR 97224

RE: McCall Oil/021062-02

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on November 8, 2004. For your reference, these analyses have been assigned our service request number K2408877.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281.

Respectfully submitted,

Columbia Analytical Services, Inc.

Abbie Spielman
Project Chemist

AS/dj

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- \# The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- \# The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative..
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- \+ The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- \# The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Anchor Environmental	**Service Request No.:**	K2408877
Project:	McCall Oil	**Date Received:**	11/8/04
Sample Matrix:	Sediment		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

One sediment sample was received for analysis at Columbia Analytical Services on 11/8/04. No discrepancies were noted upon initial sample inspection. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

No anomalies associated with the analysis of these samples were observed.

Fuel Identification and Quantification by EPA Method 8015

Sample Notes and Discussion:
The Gasoline results are semi-quantitative. Results are expected to exhibit a low bias due to a potential loss of volatile compounds during the extraction process.

Elevated Method Reporting Limits:
Sample MO-110404-CB was analyzed at a dilution due the sample matrix. The extract was highly colored and viscous, which indicated the need to perform a dilution prior to injection into the instrument. All reporting limits are adjusted accordingly.

Matrix Spike Recovery Exceptions:
The control criteria for matrix/duplicate matrix spike recovery of Residual Range Organics for sample MO-110404-CB is not applicable. The analyte concentration in the sample was higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The duplicate matrix spike recovery of Diesel Range Organics for sample MO-110404-CB was outside control criteria due to matrix interferences. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. No further corrective action was appropriate.

Volatile Organic Compounds by EPA Method 8260B

Surrogate Exceptions:
The control criteria were exceeded for the 4-Bromofluorobenzene surrogate in sample MO-110404-CBDMS due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

Approved by Amie Spreutz **Date** 12/21/04

Matrix Spike Recovery Exceptions:
The matrix spike/duplicate matrix spike recoveries of 1, 2-Dichlorobenzene, Naphthalene and Benzene for sample MO-110404-CB were outside control criteria due to matrix interferences. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

<u>**Semivolatile Organic Compounds by EPA Method 8270C**</u>

Elevated Method Reporting Limits:
The reporting limits are elevated for sample MO-110404-CB. The sample extract could not be taken to the optimal final volume prior to instrumental analysis due to the sample matrix. The extract was highly colored and viscous, which indicated the need to perform further dilution prior to injection into the instrument. Clean up of the extract was performed within the scope of the method, but did not eliminate enough of the background components to prevent dilution. A semi-quantitative screen was performed prior to final analysis. The results of the screening indicated the need to perform a dilution.

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recoveries of 4-Methylphenol, Fluoranthene, Di-n-octyl Phthalate for sample MO-110404-CB are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The matrix spike/duplicate matrix spike recoveries of Pyrene, Butyl Benzyl Phthalate, Chrysene, Benzo(b)fluoranthene, Benz(a)anthracene, Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene for sample MO-110404-CB were outside control criteria because of suspected matrix interference. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. No further corrective action was appropriate.

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL4023: Hexachlorocyclopentadiene and 2, 4-Dinitrophenol. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 4.8%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Approved by *Ami April* **Date** 6/27/04

Chain of Custody Documentation

CHAIN OF CUSTODY

Columbia Analytical Services INC.
An Employee - Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: K2408877
PAGE 1 OF 1 COC #

PROJECT NAME: McCall Oil
PROJECT NUMBER:
PROJECT MANAGER: JOHN RENDA
COMPANY/ADDRESS: 6650 SW REDWOOD LN. #110
CITY/STATE/ZIP: PORTLAND, OR 97224
E-MAIL ADDRESS:
PHONE #: 503-670-1108 FAX #: 670-1628
SAMPLER'S SIGNATURE:

00008

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 8270 8270LL	Volatile Organics 624 8260 8260	Hydrocarbons (*see below) Gas Diesel Oil 8021 BTEX	Fuel Fingerprint (FIQ) NW-HCID Screen	Oil & Grease/TRPH 1664 HEM 418.1	PCB's Aroclors 1664 SGT	Pesticides/Herbicides 608 8081A 8141A Congeners	Chlorophenolics - 8151M Tri Tetra PCP 8151A	PAHS 8310 SIM *	Metals, Total or Dissolved (See list below)	Cyanide	Hex-Chrom	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle) NO2+NO3	TOX 9020 AOX 1650 506	* 4-methylphenol	* butylbenzylphthalate	* Di-n-octylphthalate	* DIBENZOFURAN	REMARKS
MO-110404-CB	11/4/04	0745		S	2		X	X						X	X			X		X	X	X	X		

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # ___

Bill To: ___

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard (10-15 working days)

___ Provide FAX Results

___ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ___ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* see Abbie S. for questions regarding 8270 list.

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 11/8/04-0900	Signature: [signature] Date/Time: 11/8/04 1400	Signature Date/Time	Signature Date/Time
Printed Name: TIM STONE Firm: ANCHOR-PDX	Printed Name: A Pazarm Firm: CAS	Printed Name Firm	Printed Name Firm

RCOC #1 08/03

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC AS

Project/Client Anchor Work Order K240 8877

Cooler received on 11/8/07 and opened on 11/8/07 by

1. Were custody seals on outside of coolers? Y N
   If yes, how many and where? 1F
2. Were custody seals intact? Y N
3. Were signature and date present on the custody seals? Y N
4. Is the shipper's airbill available and filed? If no, record airbill number: ______ Y N
5. COC#
   Temperature of cooler(s) upon receipt: (°C) 2-9
   Temperature Blank: (°C) N/A
   Were samples hand delivered on the same day as collection? ~~Y N~~
6. Were custody papers properly filled out (ink, signed, etc.)? Y N
7. Type of packing material present MESH
8. **Did all bottles arrive in good condition (unbroken)?** Y N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? Y N
10. Did all bottle labels and tags agree with custody papers? Y N
11. **Were the correct types of bottles used for the tests indicated?** Y N
12. Were all of the preserved bottles received at the lab with the appropriate pH? ~~Y N~~
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? ~~Y N~~
14. Did the bottles originate from CAS/K or a branch laboratory? Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** ~~Y N~~
16. Was C12/Res negative? ~~Y N~~

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02		
Sample Matrix:	Sediment		

Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
MO-110404-CB	K2408877-001	11/04/2004	11/08/2004	11/11/2004	38.7	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004
		Date Analyzed:	11/11/2004

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
MO-110404-CB	K2408877-001	38.7	39.2	39.0	1	

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	McCall Oil	**Service Request :**	K2408877
Project Name :	McCall Oil	**Date Collected :**	11/04/04
Project Number :	021062-02	**Date Received :**	11/08/04
Sample Matrix :	SEDIMENT		

Carbon, Total Organic

Units : Percent
Basis : Dry

Analysis Method ASTM D4129-98M
Test Notes :

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MO-110404-CB	K2408877-001	0.05	1	11/20/04	10.9	
Method Blank	K2408877-MB	0.05	1	11/20/04	ND	

M Modified

Report By: AYaple

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	McCall Oil	**Service Request :**	K2408877
Project Name :	McCall Oil	**Date Collected :**	11/04/04
Project Number :	021062-02	**Date Received :**	11/08/04
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	11/20/04

Duplicate Summary
Inorganic Parameters

Sample Name : MO-110404-CB
Lab Code : K2408877-001DUP
Test Notes :

Units : Percent
Basis : Dry

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	ASTM D4129-98M	0.05	10.9	10.3	10.6	6	

M Modified

Report By: AYaple

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : McCall Oil
Project Name : McCall Oil
Project Number : 021062-02
Sample Matrix : SEDIMENT

Service Request : K2408877
Date Collected : 11/04/04
Date Received : 11/08/04
Date Extracted : NA
Date Analyzed : 11/20/04

Matrix Spike Summary
Inorganic Parameters

Sample Name : MO-110404-CB
Lab Code : K2408877-001MS
Test Notes :

Units : Percent
Basis : Dry

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	ASTM D4129-98M	0.05	16.5	10.9	27.7	102	75-125	

M Modified

Report By: AYaple

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	McCall Oil	**Service Request :**	K2408877
Project Name :	McCall Oil	**Date Collected :**	NA
Project Number :	021062-02	**Date Received :**	NA
Sample Matrix :	SEDIMENT	**Date Extracted :**	NA
		Date Analyzed :	11/20/04

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	Percent
Lab Code :	K2408877-LCS	Basis :	Dry
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	None	ASTM D4129-98M	0.75	0.73	97	85-115	

M Modified

Report By: AYaple

Metals

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: McCall Oil

Service Request: K2408877

Project No.: 021062-02

Project Name: McCall Oil

Sample No.	Lab Sample ID.
Batch QC	K2408860-003D
Batch QC	K2408860-003S
MO-110404-CB	K2408877-001
Method Blank	K2408877-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature:

Date: 12/7/04

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil
Matrix: SEDIMENT

Service Request: K2408877
Date Collected: 11/04/04
Date Received: 11/08/04
Units: MG/KG
Basis: Dry

Sample Name: MO-110404-CB **Lab Code:** K2408877-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	5	11/22/04	11/23/04	25.6		
Cadmium	200.8	0.05	5	11/22/04	11/23/04	1.90		
Chromium	6010B	1.9	2	11/22/04	11/30/04	189		
Copper	6010B	1.9	2	11/22/04	11/30/04	1360		
Lead	6010B	19	2	11/22/04	11/30/04	600		
Zinc	6010B	1.9	2	11/22/04	11/30/04	752		

% Solids: 38.7

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil

Matrix: SEDIMENT

Service Request: K2408877

Date Collected:

Date Received:

Units: MG/KG

Basis: Dry

Sample Name: Method Blank

Lab Code: K2408877-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	5	11/22/04	11/23/04	0.5	U	
Cadmium	200.8	0.05	5	11/22/04	11/23/04	0.05	U	
Chromium	6010B	2.0	2	11/22/04	11/30/04	2.0	U	
Copper	6010B	2.0	2	11/22/04	11/30/04	2.0	U	
Lead	6010B	20	2	11/22/04	11/30/04	20	U	
Zinc	6010B	2.0	2	11/22/04	11/30/04	2.0	U	

% Solids: 100.0

Comments:

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil
Matrix: SEDIMENT

Service Request: K2408877
Units: mg/kg
Basis: Dry
% Solids: 40.7

Sample Name: Batch QC

Lab Code: K2408860-003S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	122		4.6		111	106		200.8
Cadmium	70 - 130	12.9		0.36		11.1	113		200.8
Chromium	54 - 149	70.9		26.2		44.5	100		6010B
Copper	62 - 145	88.1		34.2		55.6	97		6010B
Lead	55 - 150	126		22.2	U	111	114		6010B
Zinc	52 - 150	196		86.6		111	99		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-6-
DUPLICATES

Client: McCall Oil
Project No.: 021062-02
Project Name: McCall Oil
Matrix: SEDIMENT

Service Request: K2408877
Units: mg/kg
Basis: Dry
% Solids: 40.7

Sample Name: Batch QC

Lab Code: K2408860-003D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	4.6		4.8		5		200.8
Cadmium	30	0.36		0.40		9		200.8
Chromium	30	26.2		27.2		4		6010B
Copper	30	34.2		33.9		1		6010B
Lead		22	U	22	U			6010B
Zinc	30	86.6		86.6		0		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: McCall Oil

Project No.: 021062-02

Project Name: McCall Oil

Service Request: K2408877

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source: ERA Lot #246

	Aqueous mg/L			Solid (mg/kg)					
Analyte	True	Found	%R	True	Found	C	Limits		%R
Arsenic				187	200		139	235	107
Cadmium				67.9	73.4		52.0	83.6	108
Chromium				143	143		114	171	100
Copper				92.7	92.0		75.9	109	99
Lead				119	119		90.9	148	100
Zinc				273	276		211	335	101

Fuel Identification Quantification
EPA Method 8015

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-110404-CB	**Units:**	mg/Kg
Lab Code:	K2408877-001	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	FIQ		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	210	1	11/16/04	11/24/04	KWG0418317	
Diesel Range Organics (DRO)	1600	HJ	210	1	11/16/04	11/24/04	KWG0418317	
Residual Range Organics (RRO)	8500	OJ	520	1	11/16/04	11/24/04	KWG0418317	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	84	20-150	11/24/04	Acceptable
o-Terphenyl	102	50-150	11/24/04	Acceptable
n-Triacontane	108	50-150	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG0418317-4	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	FIQ		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	10	1	11/16/04	11/24/04	KWG0418317	
Diesel Range Organics (DRO)	ND	U	10	1	11/16/04	11/24/04	KWG0418317	
Residual Range Organics (RRO)	ND	U	25	1	11/16/04	11/24/04	KWG0418317	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	70	20-150	11/24/04	Acceptable
o-Terphenyl	80	50-150	11/24/04	Acceptable
n-Triacontane	82	50-150	11/24/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02		
Sample Matrix:	Sediment		

Surrogate Recovery Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method:	EPA 3550B	**Units:**	PERCENT
Analysis Method:	FIQ	**Level:**	Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MO-110404-CB	K2408877-001	84	102	108
Method Blank	KWG0418317-4	70	80	82
MO-110404-CBMS	KWG0418317-1	90	104	121
MO-110404-CBDMS	KWG0418317-2	92	104	116
Lab Control Sample	KWG0418317-3	73	85	86

Surrogate Recovery Control Limits (%)

Sur1 =	4-Bromofluorobenzene	20-150
Sur2 =	o-Terphenyl	50-150
Sur3 =	n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Extracted:**	11/16/2004
Sample Matrix:	Sediment	**Date Analyzed:**	11/24/2004

Matrix Spike/Duplicate Matrix Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Sample Name:	MO-110404-CB	**Units:**	mg/Kg
Lab Code:	K2408877-001	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	FIQ	**Extraction Lot:**	KWG0418317

		MO-110404-CBMS KWG0418317-1 Matrix Spike			MO-110404-CBDMS KWG0418317-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	1600	3360	1280	139	3450	1280	146 *	19-145	3	40
Residual Range Organics (RRO)	8500	10300	638	282 #	10500	640	314 #	50-150	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Extracted:**	11/16/2004
Sample Matrix:	Sediment	**Date Analyzed:**	11/24/2004

Lab Control Spike Summary
Fuel Identification and Quantitation (FIQ) Hydrocarbon Scan

Extraction Method:	EPA 3550B	**Units:**	mg/Kg
Analysis Method:	FIQ	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0418317

	Lab Control Sample KWG0418317-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Diesel Range Organics (DRO)	359	320	112	19-145
Residual Range Organics (RRO)	171	160	107	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Volatile Organic Compounds
EPA Method 8260B

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004

Volatile Organic Compounds

Sample Name:	MO-110404-CB	**Units:**	ug/Kg
Lab Code:	K2408877-001	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Chloromethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Vinyl Chloride	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Bromomethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Chloroethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Trichlorofluoromethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Acetone	**150**		51	1	11/15/04	11/15/04	KWG0418311	
1,1-Dichloroethene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Carbon Disulfide	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Methylene Chloride	ND	U	26	1	11/15/04	11/15/04	KWG0418311	
trans-1,2-Dichloroethene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,1-Dichloroethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
2-Butanone (MEK)	**61**		51	1	11/15/04	11/15/04	KWG0418311	
2,2-Dichloropropane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
cis-1,2-Dichloroethene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Chloroform	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Bromochloromethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,1,1-Trichloroethane (TCA)	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,1-Dichloropropene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Carbon Tetrachloride	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,2-Dichloroethane (EDC)	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Benzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Trichloroethene (TCE)	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,2-Dichloropropane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Bromodichloromethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Dibromomethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
2-Hexanone	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
cis-1,3-Dichloropropene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Toluene	**38**		13	1	11/15/04	11/15/04	KWG0418311	
trans-1,3-Dichloropropene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,1,2-Trichloroethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
4-Methyl-2-pentanone (MIBK)	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,3-Dichloropropane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Tetrachloroethene (PCE)	ND	U	13	1	11/15/04	11/15/04	KWG0418311	

Comments:

00032

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004

Volatile Organic Compounds

Sample Name:	MO-110404-CB	**Units:**	ug/Kg
Lab Code:	K2408877-001	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,2-Dibromoethane (EDB)	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
Chlorobenzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,1,1,2-Tetrachloroethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Ethylbenzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
m,p-Xylenes	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
o-Xylene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Styrene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Bromoform	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Isopropylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,1,2,2-Tetrachloroethane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,2,3-Trichloropropane	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
Bromobenzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
n-Propylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
2-Chlorotoluene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
4-Chlorotoluene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,3,5-Trimethylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
tert-Butylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,2,4-Trimethylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
sec-Butylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,3-Dichlorobenzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
4-Isopropyltoluene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,4-Dichlorobenzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
n-Butylbenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,2-Dichlorobenzene	ND	U	13	1	11/15/04	11/15/04	KWG0418311	
1,2-Dibromo-3-chloropropane	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,2,4-Trichlorobenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
1,2,3-Trichlorobenzene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
Naphthalene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	
Hexachlorobutadiene	ND	U	51	1	11/15/04	11/15/04	KWG0418311	

Comments:

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004

Volatile Organic Compounds

Sample Name:	MO-110404-CB	**Units:**	ug/Kg
Lab Code:	K2408877-001	**Basis:**	Dry

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	81-120	11/15/04	Acceptable
Toluene-d8	120	77-131	11/15/04	Acceptable
4-Bromofluorobenzene	108	74-116	11/15/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	Service Request:	K2408877
Project:	McCall Oil/021062-02	Date Collected:	NA
Sample Matrix:	Sediment	Date Received:	NA

Volatile Organic Compounds

Sample Name:	Method Blank	Units:	ug/Kg
Lab Code:	KWG0418311-5	Basis:	Dry
Extraction Method:	EPA 5030A	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Chloromethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Vinyl Chloride	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Bromomethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Chloroethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Trichlorofluoromethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Acetone	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
,1-Dichloroethene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Carbon Disulfide	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Methylene Chloride	ND	U	10	1	11/15/04	11/15/04	KWG0418311	
ans-1,2-Dichloroethene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
,1-Dichloroethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
-Butanone (MEK)	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
,2-Dichloropropane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
is-1,2-Dichloroethene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Chloroform	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
romochloromethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
,1,1-Trichloroethane (TCA)	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
,1-Dichloropropene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Carbon Tetrachloride	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
,2-Dichloroethane (EDC)	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
enzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
richloroethene (TCE)	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
,2-Dichloropropane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
romodichloromethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
ibromomethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
-Hexanone	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
is-1,3-Dichloropropene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
oluene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
ans-1,3-Dichloropropene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
,1,2-Trichloroethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
-Methyl-2-pentanone (MIBK)	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
,3-Dichloropropane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
etrachloroethene (PCE)	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	

omments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0418311-5	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
1,2-Dibromoethane (EDB)	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
Chlorobenzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
1,1,1,2-Tetrachloroethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Ethylbenzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
m,p-Xylenes	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
o-Xylene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Styrene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Bromoform	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Isopropylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,1,2,2-Tetrachloroethane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
1,2,3-Trichloropropane	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
Bromobenzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
n-Propylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
2-Chlorotoluene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
4-Chlorotoluene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,3,5-Trimethylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
tert-Butylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,2,4-Trimethylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
sec-Butylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,3-Dichlorobenzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
4-Isopropyltoluene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,4-Dichlorobenzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
n-Butylbenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,2-Dichlorobenzene	ND	U	5.0	1	11/15/04	11/15/04	KWG0418311	
1,2-Dibromo-3-chloropropane	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,2,4-Trichlorobenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
1,2,3-Trichlorobenzene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
Naphthalene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	
Hexachlorobutadiene	ND	U	20	1	11/15/04	11/15/04	KWG0418311	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0418311-5	**Basis:**	Dry

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	116	81-120	11/15/04	Acceptable
Toluene-d8	120	77-131	11/15/04	Acceptable
4-Bromofluorobenzene	113	74-116	11/15/04	Acceptable

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: McCall Oil
Project: McCall Oil/021062-02
Sample Matrix: Sediment

Service Request: K2408877

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030A
Analysis Method: 8260B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	
MO-110404-CB	K2408877-001	115	120	108	
Method Blank	KWG0418311-5	116	120	113	
MO-110404-CBMS	KWG0418311-1	116	120	112	
MO-110404-CBDMS	KWG0418311-2	113	121	118	*
Lab Control Sample	KWG0418311-3	110	118	112	

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	81-120
Sur2 = Toluene-d8	77-131
Sur3 = 4-Bromofluorobenzene	74-116

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: McCall Oil
Project: McCall Oil/021062-02
Sample Matrix: Sediment

Service Request: K2408877
Date Extracted: 11/15/2004
Date Analyzed: 11/15/2004

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: MO-110404-CB
Lab Code: K2408877-001
Extraction Method: EPA 5030A
Analysis Method: 8260B

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0418311

Analyte Name	Sample Result	MO-110404-CBMS KWG0418311-1 Matrix Spike Result	Expected	%Rec	MO-110404-CBDMS KWG0418311-2 Duplicate Matrix Spike Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
,1-Dichloroethene	ND	68.4	126	54	64.2	128	50	46-128	6	40
Benzene	ND	57.5	126	46	53.8	128	42 *	45-129	7	40
'richloroethene (TCE)	ND	36.5	126	29	36.1	128	28	18-153	1	40
'oluene	38	78.7	126	33	81.2	128	34	31-136	3	40
Chlorobenzene	ND	24.1	126	19	22.7	128	18	17-130	6	40
,2-Dichlorobenzene	ND	10.0	126	8 *	8.33	128	7 *	10-127	18	40
Naphthalene	ND	5.89	126	5 *	5.02	128	4 *	10-131	16	40

esults flagged with an asterisk (*) indicate values outside control criteria.
esults flagged with a pound (#) indicate the control criteria is not applicable.
ercent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Extracted:**	11/15/2004
Sample Matrix:	Sediment	**Date Analyzed:**	11/15/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A	**Units:**	ug/Kg
Analysis Method:	8260B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0418311

	Lab Control Sample KWG0418311-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	52.1	50.0	104	43-163
Chloromethane	43.8	50.0	88	51-147
Vinyl Chloride	43.7	50.0	87	55-155
Bromomethane	40.1	50.0	80	37-145
Chloroethane	41.2	50.0	82	44-143
Trichlorofluoromethane	42.2	50.0	84	55-134
Acetone	220	250	88	43-119
1,1-Dichloroethene	51.5	50.0	103	71-127
Carbon Disulfide	92.8	100	93	63-139
Methylene Chloride	49.6	50.0	99	70-127
trans-1,2-Dichloroethene	46.0	50.0	92	68-122
1,1-Dichloroethane	48.1	50.0	96	66-120
2-Butanone (MEK)	263	250	105	37-137
2,2-Dichloropropane	47.8	50.0	96	68-132
cis-1,2-Dichloroethene	51.3	50.0	103	72-122
Chloroform	49.4	50.0	99	70-123
Bromochloromethane	53.4	50.0	107	75-126
1,1,1-Trichloroethane (TCA)	47.8	50.0	96	68-126
1,1-Dichloropropene	43.3	50.0	87	70-127
Carbon Tetrachloride	47.0	50.0	94	69-128
1,2-Dichloroethane (EDC)	48.6	50.0	97	63-129
Benzene	49.7	50.0	99	78-124
Trichloroethene (TCE)	47.3	50.0	95	69-128
1,2-Dichloropropane	50.0	50.0	100	69-123
Bromodichloromethane	50.3	50.0	101	67-129
Dibromomethane	52.4	50.0	105	74-124
2-Hexanone	183	250	73	60-124
cis-1,3-Dichloropropene	51.6	50.0	103	73-127
Toluene	48.7	50.0	97	75-128
trans-1,3-Dichloropropene	41.5	50.0	83	68-114
1,1,2-Trichloroethane	47.1	50.0	94	77-118
4-Methyl-2-pentanone (MIBK)	262	250	105	55-136
1,3-Dichloropropane	47.4	50.0	95	77-119
Tetrachloroethene (PCE)	41.5	50.0	83	70-124
Dibromochloromethane	49.4	50.0	99	74-119
1,2-Dibromoethane (EDB)	47.9	50.0	96	76-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Extracted:**	11/15/2004
Sample Matrix:	Sediment	**Date Analyzed:**	11/15/2004

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A	**Units:**	ug/Kg
Analysis Method:	8260B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0418311

	Lab Control Sample KWG0418311-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chlorobenzene	45.3	50.0	91	76-119
1,1,1,2-Tetrachloroethane	47.3	50.0	95	76-122
Ethylbenzene	44.3	50.0	89	75-126
m,p-Xylenes	91.8	100	92	76-131
o-Xylene	45.0	50.0	90	76-128
Styrene	46.0	50.0	92	75-127
Bromoform	49.7	50.0	99	72-121
Isopropylbenzene	38.4	50.0	77	62-125
1,1,2,2-Tetrachloroethane	46.1	50.0	92	69-120
1,2,3-Trichloropropane	46.4	50.0	93	73-120
Bromobenzene	46.1	50.0	92	75-127
n-Propylbenzene	39.8	50.0	80	70-131
2-Chlorotoluene	40.6	50.0	81	73-129
4-Chlorotoluene	38.4	50.0	77	70-128
1,3,5-Trimethylbenzene	40.8	50.0	82	74-132
tert-Butylbenzene	42.1	50.0	84	68-131
1,2,4-Trimethylbenzene	43.6	50.0	87	76-137
sec-Butylbenzene	42.3	50.0	85	69-135
1,3-Dichlorobenzene	40.8	50.0	82	69-129
4-Isopropyltoluene	38.1	50.0	76	70-130
1,4-Dichlorobenzene	41.8	50.0	84	71-127
n-Butylbenzene	38.0	50.0	76	66-140
1,2-Dichlorobenzene	43.8	50.0	88	73-123
1,2-Dibromo-3-chloropropane	46.0	50.0	92	66-120
1,2,4-Trichlorobenzene	39.4	50.0	79	63-139
1,2,3-Trichlorobenzene	44.2	50.0	88	67-137
Naphthalene	46.9	50.0	94	69-134
Hexachlorobutadiene	40.3	50.0	81	58-132

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Semi-Volatile Organic Compounds
EPA Method 8270C

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-110404-CB	**Units:**	ug/Kg
Lab Code:	K2408877-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	3000 JD	260	75	2	11/18/04	12/15/04	KWG0418523	
Naphthalene	64 JD	260	34	2	11/18/04	12/15/04	KWG0418523	
2-Methylnaphthalene	ND JU	260	31	2	11/18/04	12/15/04	KWG0418523	
Acenaphthylene	ND JU	260	37	2	11/18/04	12/15/04	KWG0418523	
Acenaphthene	ND JU	260	26	2	11/18/04	12/15/04	KWG0418523	
Dibenzofuran	69 JD	260	34	2	11/18/04	12/15/04	KWG0418523	
Fluorene	72 JD	260	44	2	11/18/04	12/15/04	KWG0418523	
Phenanthrene	660 JD	260	34	2	11/18/04	12/15/04	KWG0418523	
Anthracene	140 JD	260	37	2	11/18/04	12/15/04	KWG0418523	
Fluoranthene	1400 JD	260	57	2	11/18/04	12/15/04	KWG0418523	
Pyrene	1200 JD	260	34	2	11/18/04	12/15/04	KWG0418523	
Butyl Benzyl Phthalate	930 JD	260	39	2	11/18/04	12/15/04	KWG0418523	
Benz(a)anthracene	400 JD	260	37	2	11/18/04	12/15/04	KWG0418523	
Chrysene	1100 JD	260	37	2	11/18/04	12/15/04	KWG0418523	
Di-n-octyl Phthalate	11000 JD	260	31	2	11/18/04	12/15/04	KWG0418523	
Benzo(b)fluoranthene	1100 JD	260	65	2	11/18/04	12/15/04	KWG0418523	
Benzo(k)fluoranthene	270 JD	260	65	2	11/18/04	12/15/04	KWG0418523	
Benzo(a)pyrene	490 JD	260	42	2	11/18/04	12/15/04	KWG0418523	
Indeno(1,2,3-cd)pyrene	530 JD	260	49	2	11/18/04	12/15/04	KWG0418523	
Dibenz(a,h)anthracene	150 JD	260	57	2	11/18/04	12/15/04	KWG0418523	
Benzo(g,h,i)perylene	790 JD	260	60	2	11/18/04	12/15/04	KWG0418523	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	63	40-123	12/15/04	Acceptable
Nitrobenzene-d5	61	24-128	12/15/04	Acceptable
2-Fluorobiphenyl	77	28-126	12/15/04	Acceptable
Terphenyl-d14	119	56-152	12/15/04	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	11/04/2004
Sample Matrix:	Sediment	**Date Received:**	11/08/2004

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-110404-CB	**Units:**	ug/Kg
Lab Code:	K2408877-001	**Basis:**	Dry

Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0418523-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Methylphenol†	ND	U	5.0	2.9	1	11/18/04	12/01/04	KWG0418523	
Naphthalene	ND	U	5.0	1.3	1	11/18/04	12/01/04	KWG0418523	
2-Methylnaphthalene	ND	U	5.0	1.2	1	11/18/04	12/01/04	KWG0418523	
Acenaphthylene	ND	U	5.0	1.4	1	11/18/04	12/01/04	KWG0418523	
Acenaphthene	ND	U	5.0	1.0	1	11/18/04	12/01/04	KWG0418523	
Dibenzofuran	ND	U	5.0	1.3	1	11/18/04	12/01/04	KWG0418523	
Fluorene	ND	U	5.0	1.7	1	11/18/04	12/01/04	KWG0418523	
Phenanthrene	ND	U	5.0	1.3	1	11/18/04	12/01/04	KWG0418523	
Anthracene	ND	U	5.0	1.4	1	11/18/04	12/01/04	KWG0418523	
Fluoranthene	ND	U	5.0	2.2	1	11/18/04	12/01/04	KWG0418523	
Pyrene	ND	U	5.0	1.3	1	11/18/04	12/01/04	KWG0418523	
Butyl Benzyl Phthalate	ND	U	5.0	1.5	1	11/18/04	12/01/04	KWG0418523	
Benz(a)anthracene	ND	U	5.0	1.4	1	11/18/04	12/01/04	KWG0418523	
Chrysene	ND	U	5.0	1.4	1	11/18/04	12/01/04	KWG0418523	
Di-n-octyl Phthalate	ND	U	5.0	1.2	1	11/18/04	12/01/04	KWG0418523	
Benzo(b)fluoranthene	ND	U	5.0	2.5	1	11/18/04	12/01/04	KWG0418523	
Benzo(k)fluoranthene	ND	U	5.0	2.5	1	11/18/04	12/01/04	KWG0418523	
Benzo(a)pyrene	ND	U	5.0	1.6	1	11/18/04	12/01/04	KWG0418523	
Indeno(1,2,3-cd)pyrene	ND	U	5.0	1.9	1	11/18/04	12/01/04	KWG0418523	
Dibenz(a,h)anthracene	ND	U	5.0	2.2	1	11/18/04	12/01/04	KWG0418523	
Benzo(g,h,i)perylene	ND	U	5.0	2.3	1	11/18/04	12/01/04	KWG0418523	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	78	40-123	12/01/04	Acceptable
Nitrobenzene-d5	75	24-128	12/01/04	Acceptable
2-Fluorobiphenyl	80	28-126	12/01/04	Acceptable
Terphenyl-d14	95	56-152	12/01/04	Acceptable

Comments:

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0418523-5	**Basis:**	Dry

Analyte Comments	
4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02		
Sample Matrix:	Sediment		

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	PERCENT
Analysis Method:	8270C	**Level:**	Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
MO-110404-CB	K2408877-001	63 D	61 D	77 D	119 D
Method Blank	KWG0418523-5	78	75	80	95
MO-110404-CBMS	KWG0418523-1	55 D	47 D	63 D	75 D
MO-110404-CBDMS	KWG0418523-2	50 D	55 D	58 D	91 D
Lab Control Sample	KWG0418523-3	80	80	84	94
Duplicate Lab Control Sample	KWG0418523-4	78	76	80	90

Surrogate Recovery Control Limits (%)

Sur1 =	Phenol-d6	40-123
Sur2 =	Nitrobenzene-d5	24-128
Sur3 =	2-Fluorobiphenyl	28-126
Sur4 =	Terphenyl-d14	56-152

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	McCall Oil	**Service Request:**	K2408877
Project:	McCall Oil/021062-02	**Date Extracted:**	11/18/2004
Sample Matrix:	Sediment	**Date Analyzed:**	12/15/2004

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MO-110404-CB	**Units:**	ug/Kg
Lab Code:	K2408877-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0418523

		MO-110404-CBMS KWG0418523-1 Matrix Spike			MO-110404-CBDMS KWG0418523-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
4-Methylphenol	3000	2510	323	-142 #	2080	323	-277 #	13-139	19	40
Naphthalene	64	213	323	46	206	323	44	16-137	3	40
2-Methylnaphthalene	ND	205	323	64	200	323	62	29-119	3	40
Acenaphthylene	ND	243	323	75	241	323	75	35-145	1	40
Acenaphthene	ND	231	323	72	220	323	68	30-138	5	40
Dibenzofuran	69	251	323	57	260	323	59	32-131	4	40
Fluorene	72	284	323	66	274	323	62	31-145	4	40
Phenanthrene	660	724	323	20	700	323	12	12-161	3	40
Anthracene	140	296	323	47	288	323	45	26-153	2	40
Fluoranthene	1400	1100	323	-83 #	1180	323	-56 #	10-170	8	40
Pyrene	1200	975	323	-55 *	1050	323	-31 *	10-173	8	40
Butyl Benzyl Phthalate	930	802	323	-40 *	839	323	-29 *	38-155	5	40
Benz(a)anthracene	400	472	323	22 *	478	323	24	23-159	1	40
Chrysene	1100	960	323	-28 *	934	323	-36 *	19-166	3	40
Di-n-octyl Phthalate	11000	1020	323	-2941 #	917	323	-2971 #	45-144	11	40
Benzo(b)fluoranthene	1100	897	323	-52 *	914	323	-47 *	12-168	2	40
Benzo(k)fluoranthene	270	411	323	42	436	323	50	10-166	6	40
Benzo(a)pyrene	490	556	323	22	560	323	23	10-166	1	40
Indeno(1,2,3-cd)pyrene	530	597	323	20	555	323	7 *	16-164	7	40
Dibenz(a,h)anthracene	150	252	323	33	279	323	41	33-152	10	40
Benzo(g,h,i)perylene	790	714	323	-22 *	686	323	-31 *	17-154	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

U0048

Client: McCall Oil
Project: McCall Oil/021062-02
Sample Matrix: Sediment

Service Request: K2408877
Date Extracted: 11/18/2004
Date Analyzed: 12/01/2004

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0418523

	Lab Control Sample KWG0418523-3 Lab Control Spike			Duplicate Lab Control Sample KWG0418523-4 Duplicate Lab Control Spike					
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
4-Methylphenol	172	250	69	172	250	69	30-111	0	40
Naphthalene	187	250	75	190	250	76	43-126	1	40
2-Methylnaphthalene	188	250	75	188	250	75	40-114	0	40
Acenaphthylene	222	250	89	217	250	87	49-131	2	40
Acenaphthene	201	250	81	195	250	78	46-122	3	40
Dibenzofuran	200	250	80	192	250	77	42-120	4	40
Fluorene	209	250	83	206	250	82	46-126	1	40
Phenanthrene	203	250	81	206	250	83	48-125	2	40
Anthracene	207	250	83	212	250	85	50-125	2	40
Fluoranthene	217	250	87	216	250	86	53-128	1	40
Pyrene	203	250	81	199	250	80	45-135	2	40
Butyl Benzyl Phthalate	220	250	88	216	250	86	54-134	2	40
Benz(a)anthracene	215	250	86	213	250	85	52-131	1	40
Chrysene	226	250	90	221	250	88	54-129	2	40
Di-n-octyl Phthalate	222	250	89	222	250	89	54-136	0	40
Benzo(b)fluoranthene	214	250	85	215	250	86	52-133	1	40
Benzo(k)fluoranthene	219	250	88	218	250	87	57-128	1	40
Benzo(a)pyrene	216	250	86	217	250	87	51-133	1	40
Indeno(1,2,3-cd)pyrene	214	250	85	214	250	86	50-137	0	40
Dibenz(a,h)anthracene	217	250	87	213	250	85	46-144	2	40
Benzo(g,h,i)perylene	218	250	87	215	250	86	45-141	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00049

ATTACHMENT C

DATA VALIDATION REVIEW

DATA VALIDATION REVIEW REPORT

MCCALL / GWCC

October 2004

This report summarizes the review of analytical results for groundwater samples collected October 21, 22 and November 11, 2004, at the McCall/GWCC site in Portland, Oregon. Samples were collected by Anchor Environmental and submitted to Columbia Analytical Services, Inc. (CAS) in Kelso, Washington. Samples were analyzed for one or more of the following: polynuclear aromatic hydrocarbons (PAHs), plus 4-methylphenol, butylbenzylphthalate, di-n-octylphthalate and dibenzofuran by U.S. Environmental Protection Agency (USEPA) method 8270C; volatile organic compounds (VOCs) by USEPA method 8260B (USEPA, 1986); arsenic, chromium and copper by USEPA method 6020; petroleum hydrocarbons by Fuel Fingerprint (FIQ)-TPH. CAS sample data group numbers K2408403 and K2408430 were reviewed.

Sample ID	Location	Lab ID	Matrix	Analysis Requested
MO-102104-1	MW-10	K2408403-1	Water	VOC, FIQ-TPH, Metals (As)
MO-102104-2	EX-7	K2408403-2	Water	FIQ-TPH, Metals (As)
MO-102104-3	EX-7 (dup)	K2408403-3	Water	FIQ-TPH, Metals (As)
MO-102104-4	MW-6	K2408403-4	Water	VOC, FIQ-TPH, Metals (As)
MO-102104-5	MW-12	K2408403-5	Water	FIQ-TPH, Metals (As)
MO-102104-6	EX-2	K2408403-6	Water	PAH, FIQ-TPH, Metals (As)
MO-102104-7	EX-3	K2408403-7	Water	PAH, FIQ-TPH, Metals (As)
MO-102104-8	MW-8	K2408403-8	Water	PAH, VOC, FIQ-TPH, Metals (As, Cr, Cu)
MO-102104-9	MW-7	K2408403-9	Water	PAH, VOC, FIQ-TPH, Metals (As, Cr, Cu)
MO-102104-10	MW-14	K2408403-10	Water	PAH, VOC, FIQ-TPH, Metals (As, Cr, Cu)
Trip Blank		K2408403-11	Water	VOC
MO-102204-11	MW-5	K2408430-1	Water	VOC, FIQ-TPH, PAH , Metals (As)
MO-102204-12	EX-1	K2408430-2	Water	VOC, FIQ-TPH, Metals (As)
MO-102204-13	MW-1	K2408430-3	Water	VOC, FIQ-TPH, Metals (As, Cr, Cu)
MO-102204-14	MW-1 (dup)	K2408430-4	Water	VOC, FIQ-TPH, Metals (As, Cr, Cu)
MO-102204-15	MW-3	K2408430-5	Water	VOC, FIQ-TPH, Metals (As, Cr, Cu)
MO-102204-16	MW-9	K2408430-6	Water	FIQ-TPH, Metals (As)
MO-102204-17	EX-4 (MW-2)	K2408430-7	Water	VOC, FIQ-TPH, Metals (As)
MO-102204-18	MW-15	K2408430-8	Water	VOC
Trip Blank-2		K2408430-9	Water	VOC
MO-110404-CB	S-3	K2408877-1	Water	PAH, VOC, FIQ-TPH, Metals (As, Cd, Cr, Cu, Pb, Zn), TOC

Data Validation and Qualifications

The following comments refer to the laboratory's performance in meeting the quality assurance/quality control (QA/QC) guidelines outlined in the data quality objective section of the Quality Assurance Project Plan (QAPP). Laboratory results were reviewed following USEPA guidelines (USEPA, 1994, 1999). Unless noted in this report, laboratory results for the samples listed above were within QC criteria. Gasoline results are semi-quantitative, due to potential loss of volatiles during the extraction process.

Laboratory Data Package and Field Documentation

Field documentation was checked for completeness and accuracy. The following were noted by CAS at the time of sample receipt: the samples were received in good condition and were consistent with the accompanying chain of custody.

Holding Times and Sample Preservation

Samples were appropriately preserved and analyses were conducted within holding times. One sample was pH corrected upon arrival at the laboratory, no data were qualified.

Laboratory Method Blanks

Laboratory method blanks were analyzed at the required frequencies. No analytes were detected in the laboratory method blanks.

Field Quality Control

Trip Blanks

Two trip blanks were submitted with the VOC samples. The trip blanks were free of contamination.

Field Duplicates

Two field duplicate pairs were collected: MO-102104-3/MO-102104-4 and MO-102204-13/MO-102204-14. The field duplicate pairs were comparable. No data were qualified due to these results.

Surrogate Recoveries

Surrogate recoveries for organic analyses were performed at the required frequencies. Surrogate recoveries were within the laboratory control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

Matrix spike (MS) and matrix spike duplicate (MSD) samples, were analyzed at the required frequency. All MS and MSD percent recoveries (%Rs) were within the laboratory control limits with the following exceptions.

- The K2408877 FIQ MS/MSD %R for diesel and RRO's were above the control limits due to a high analyte concentration in the spiked sample. As the LCS was within acceptable limits, no data were qualified.
- The K2408877 VOC MS/MSD %R for 1,2-dichlorobenzene (8%, 7%) and naphthalene (5%, 4%) was below the control limits. As the LCS was acceptable, the associated sample results for these two analytes are only qualified as estimated (J), not rejected.
- The K2408877 VOC MSD %R for benzene (42%) was below the control limits. As the MS and LCS were within the control limits; no data were qualified.
- The K2408877 SVOC MS/MSD %Rs for 10 of the 21 spiked PAHs were outside the control limits due to high analyte concentration in the spiked sample. All PAHs are qualified as estimated (J) for the associated sample MO-110404-CB.

Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

Laboratory control samples were analyzed at the required frequencies. All LCS and LCSD percent recoveries were within laboratory control limits, no data were qualified due to these results.

Method Reporting Limits

Sample results were reported using the laboratories method reporting limits. Reporting limits were acceptable. Samples MO-102104-4 and MO-102204-12 were diluted for VOCs due to high analyte concentrations. Sample MO-110404-CB was diluted for PAHs due to high analyte concentrations. The reporting limits were appropriately adjusted to reflect the dilution.

Overall Assessment

The data are judged to be acceptable for their intended use as qualified. The following qualifiers were added as a result of this review.

Sample ID	Analyte	Original Result	Qualified Result	Reason
MO-110404-CB	diesel	1600 H	1600 JH	MS/MSD %R out
	RROs	8500 O	8500 JO	MS/MSD %R out
	1,2-dichlorobenzene	13 U	13 UJ	MS/MSD %R out
	naphthalene	51 U	51 UJ	MS/MSD %R out
	PAHs	U, D, or JD	JU or JD	MS/MSD %R out

Precision, Accuracy, and Completeness

Precision: All precision goals were met.

Accuracy: All accuracy goals were met.

Completeness: Completeness was 100 percent, all data are useable as qualified.

REFERENCES

USEPA. 1983. Methods for Chemical Analysis of Water and Wastes. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio. EPA-600/4-79-020.

USEPA. 1986. Test methods for Evaluating Solid Waste: Physical/Chemical Methods. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. EPA-530/SW-846.

USEPA. 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. EPA 540/R-94/013. February.

USEPA. 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. EPA 540/R-99/008. October.

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October 15, 2004
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Third Quarter 2004 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This status report provides DEQ with information on the remedial investigation tasks completed during the third quarter 2004, and work planned for the fourth quarter 2004 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED THIRD QUARTER 2004

- data management and reporting
- submitted a revised draft of the Remedial Investigation Report to DEQ on July 30, 2004
- project management and meetings

PLANNED FOURTH QUARTER 2004 RI TASKS

- data management and reporting
- sample monitoring wells consistent with the sampling plan (Table 15) proposed in the July 2004 Draft Remedial Investigation Report
- evaluate the stormwater collection system and consider DEQ's request for a plan to conduct additional stormwater and catch basin sediment monitoring
- project management and meetings

RESULTS

No new data was generated during third quarter 2004.

PROBLEMS ENCOUNTERED

No problems were encountered during third quarter 2004.

If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical

DRAFT

REMEDIAL INVESTIGATION REPORT

MCCALL OIL AND CHEMICAL CORPORATION

VOLUME 1
TEXT, TABLES, FIGURES

Prepared for
McCall Oil and Chemical Corporation
Portland, Oregon

Prepared by
Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Ste 110
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July 2004

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1 EXECUTIVE SUMMARY

1.1 Work Completed

- **Agreement and Workplans.** McCall Oil and Chemical Corporation (MOCC) and the Oregon Department of Environmental Quality (DEQ) entered into a Voluntary Agreement for Remedial Investigation and Source Control Measures (Agreement) on May 8, as amended in August, 2000. The RI Proposal was completed June, 2000. The Focused RI Investigation Workplan (Workplan) was completed November 16, 2000.
- **Operational and Release History.** Preparation of the RI Proposal included review of site records with employee interviews to compile a facility history of chemicals handled and documented chemical releases. The history of releases was amended by additional employee interviews and resubmitted in Appendix C of the April, 2001 Interim Status Report.
- **Meetings, Reports and Communications.** Since signing the Agreement, McCall has maintained close communication with DEQ through the submittal of eight status reports, two supplemental workplans, five meetings, numerous e-mail and phone conversations.
- **Conceptual Site Model.** The project CSM identified the potential pathways by which potential human or ecological receptors could be exposed to chemicals of interest (COIs) from the site.
- **COIs Investigated.** The RI evaluated the following classes of COIs for the potential pathways identified in the CSM.
  - chlorinated VOCs
  - total petroleum hydrocarbons (TPHs) as diesel, oil, and gasoline
  - polynuclear aromatic hydrocarbons (PAHs)
  - benzene, toluene, ethylbenzene, xylenes
  - metals (arsenic, cadmium, chromium, copper, lead, zinc)
  - miscellaneous semivolatile organic compounds (SVOCs)
- **Beneficial Use Evaluation.**
- **Ecological Level 1 Scoping Assessment**
- **Groundwater Assessment.** The groundwater pathway was assessed in phases through the installation and sampling of 63 GeoProbe borings and 20 monitoring

wells. Four monitoring events were conducted, during which the wells were tested for the COIs. Groundwater flow in the alluvial aquifer was defined using hydrologic data from the monitoring events. Alluvial aquifer hydraulic properties were determined through the completion of aquifer well tests. The grain size and total organic carbon of the shallow aquifer materials were also tested. Results of the grain size and total organic carbon are in Appendix G.

- **Stormwater Assessment** The storm water pathway was assessed by sampling storm water and sediments from three facility catch basins and an oil-water separator. Storm water from two rainfall events was sampled and tested for the COIs. Sediment from the three catch basins was tested for the COIs.
- **Risk Screen**. The risk screen included an analysis of COI concentrations that have occurred along the groundwater, storm water and soil pathways identified in the CSM. The risk screen process identified contaminants of potential concern (COPCs) for further evaluation and risk assessment.

1.2 Findings

- **Beneficial Use.** The only identified beneficial use for site groundwater and storm water results from their role as recharge sources for the adjacent Willamette River. Drinking water is not a viable beneficial use for groundwater beneath the Site.
- **Ecological Level 1 Scoping Assessment.** Available evidence indicates there are no significant pathways by which important terrestrial ecological receptors could be exposed to site related chemicals that are present in soil. Site related chemicals in groundwater or storm water could migrate to surface water of the Willamette River where they could be encountered by ecological receptors.
- **Groundwater Findings.** As defined for this project the alluvial aquifer includes dredge sand overlying river alluvium. The river alluvium is approximately 75 feet thick and overlies Columbia River Basalt bedrock. Only groundwater in the upper portion of the alluvial aquifer has water quality impacts from neighboring properties and historic site operations. Groundwater in the alluvial aquifer flows to the Willamette River. Horizontal hydraulic conductivity of the alluvial aquifer ranges from 0.003 to 0.16 ft/minute.
  - TPH in the gasoline, diesel, and heavy fuel oil ranges has been detected in the alluvial aquifer throughout the site. A petroleum light non-aqueous phase

liquid (LNAPL) identified as a residual Bunker C or diesel fuel has been detected on the boundary between the facility and Tube Forgings. Review of the DEQ UST file for Tube Forgings shows that Tube Forgings had a release of Bunker C fuel near the McCall property line. The shape of the LNAPL plume along the property line and forensic identification of the product indicates that the LNAPL migrated onto the McCall property from the Tube Forgings Bunker C release.

- Trace concentrations of the SVOC COIs have been detected in the alluvial aquifer.
- Two areas of chlorinated VOC contamination have been identified. The largest area represents a plume that originates near well EX-1 in the former solvent drumming area and extends downgradient to the river. The second area includes several wells on the Quadra property and this contamination may be a plume that has developed from several sources.
- Copper, chrome, and arsenic from a former wood treating chemical packaging process have been detected in groundwater.

- **Groundwater and Soil Risk Screen Results.**
  - Groundwater COI concentrations at shoreline wells did not exceed chronic aquatic life criteria for any constituents (Table 13).
  - Groundwater gasoline, diesel, and PAH concentrations did not exceed DEQ RBCs for volatilization to outdoor air or vapor intrusion to buildings (Tables 5 and 6). For these constituents, the indoor and outdoor air pathways do not pose a significant risk until saturation conditions are reached (i.e., free product). Because groundwater is encountered at depths of about 13 to >20 feet below grade (Table 4), direct contact of groundwater with excavation workers is not considered a significant pathway. Several of the wells appear impacted by offsite sources.
  - Chlorinated solvent concentrations were above RBCs for vapor intrusion to indoor air in very limited areas of the Site (Table 7). TCE and PCE were consistently at or above indoor air RBCs at location EX-1. TCE was above the vapor intrusion RBC in one monitoring round at location MW-6; however, this exceedance has not been confirmed in two subsequent monitoring rounds. Neither of these two locations are situated below an enclosed

building; thus, the pathway does not appear to be complete considering RBCs for volatilization to outdoor air were not exceeded.

- Petroleum LNAPL is present and may be a hot spot.
- Petroleum constituents (gasoline and diesel) in Site soils did not exceed DEQ risk-based concentrations (RBCs) for occupational and excavation workers (Table 9). In a very limited location (GP-31, 14-16′), the construction worker RBC for diesel was exceeded. GP-31 is within the LNAPL Bunker C plume. This same sample exceeded RBCs for three carcinogenic PAH compounds for occupational and/or construction worker scenarios (Table 10). However, because of the excessive depth of this sample (14 to 16 feet below grade), these are not considered significant exposure pathways. One other sample (GP-29, 4-6′) exceeded the occupational RBC for benzo(a)pyrene. Samples from both locations (GP-31 and GP-29) were collected from areas identified with LNAPL.
- No VOCs in site soils, neither hydrocarbons nor chlorinated solvents, were above Site screening levels for direct contact, indoor or outdoor air (Table 11).

- **Stormwater and Catch Basin Sediment Findings.**
  - Constituents from all classes of the COIs were detected in storm water.
  - NPDES concentration limits for Quadra Chemical and McCall Oil were not exceeded.
  - Target COIs were also detected in the sediment samples obtained from the catch basins.

- **Stormwater and Catch Basin Sediment Risk Screen Results.**
  - No constituents in stormwater exceeded the aquatic life screening criteria (Table 14).
  - Catch basin sediment COI concentrations did not exceed Draft DEQ RBCs for excavation workers, which represent workers who may be involved with maintenance of the storm sewer (Tables 5, 6). Catch basin sediment arsenic concentrations did exceed Region 9 industrial PRGs. The actual exposure that occurs during annual catch basin cleaning is likely much less than is assumed for the derivation of the arsenic industrial PRG.

- McCall has implemented best management practices (BMPs) to protect stormwater quality, including inlet protection, oil-water separator, and routine cleanout of accumulated sediments in catch basins.
- Based on the risk screening evaluation, no COPCs were identified for the storm water pathway to the river.

- **COPCs and Exposure Pathways.** Based on the risk screening analysis, the following COPCs and exposure pathways may warrant further evaluation.
  - carcinogenic PAHs (LNAPL free product area; contingent construction worker)
  - TPH (LNAPL free product area; contingent construction worker)
  - arsenic (storm sewer utility worker)
  - chlorinated VOCs (indoor air, occupational workers)

1.3 Recommendations

The following tasks are recommended to fill the remaining Remedial Investigation data gaps.

1.3.1 LNAPL Characterization

Characterization of the LNAPL detected at well MW-11 was recently completed to support a hot spot determination. A total of fourteen Geoprobe borings were advanced and two monitoring wells were installed (one in the center of the plume and the other at the downgradient boundary) to identify the extent of the LNAPL plume. The extent of the onsite LNAPL plume was identified (Figure 2); however, the full extent of the LNAPL plume cannot be determined until investigations are carried out on the Tube Forgings property. Forensic analysis of the LNAPL (Appendix G) showed that the LNAPL is a residual Bunker C or diesel fuel. The DEQ UST files for Tube Forgings shows that Tube Forgings had a Bunker C release near the McCall property line. Tube Forgings is responsible for future evaluation and remediation of the LNAPL on the McCall property.

1.3.2 Focused Human Health Risk Assessment

A focused upland human health risk assessment may be necessary to better quantify the risks associated with the LNAPL area adjacent to Tube Forgings, arsenic in the storm sewer catch basin sediments, and potential chlorinated VOCs impacts to indoor air. If an upland human health risk assessment is required by DEQ, McCall may elect to conduct the risk assessment under a separate VCP agreement.

1.3.3 Bioaccumulation

Assessment of bioaccumulation risks to fish and fish-eating organisms (including humans) is a watershed-scale issue that is best evaluated in consideration of the cumulative effects of all point and nonpoint source mass loadings to the river, and their effects on the long-term average concentration in the receiving water and the surface-weighted average concentration in sediments. The bioaccumulation risk associated with COIs found at this Site, if any, should be evaluated in the context of the regional investigation currently underway by the Lower Willamette Group. If necessary, the information presented herein will be sufficient to develop mass loadings for comparison with other point and nonpoint sources to the river.

2 INTRODUCTION

On behalf of McCall Oil & Chemical Corporation (MOCC), Anchor Environmental L.L.C. (Anchor) prepared this draft Remedial Investigation report for the MOCC and former Great Western Chemical Company facility in Portland, Oregon. This report was prepared pursuant to a "Voluntary Agreement For Remedial Investigation and Source Control Measures" (the Agreement) entered into between MOCC/GWCC and the DEQ on May 8 as amended in August, 2000. As of July 15, 2001, the former GWCC facility has been operated by Quadra Chemical Corporation (Quadra) and MOCC retains responsibility for meeting the obligations of the Agreement. The Agreement requires MOCC to conduct an RI that satisfies the requirements of OAR 340-122-080 and to assess and implement, as needed, source control measures to address contaminant migration from the facility to the Willamette River consistent with OAR 340-122-070. This document is designed to satisfy the requirements for the Remedial Investigation Report described in the scope of work (SOW), Attachment B to the Agreement.

The Agreement is a response to the DEQ's efforts to investigate potential upland sources of contamination along the Portland Harbor, at a facility-by-facility level. Information from this investigation may be used to support the Portland Harbor sediment RI and feasibility study (FS) as applicable. The overlying goal of the Agreement, therefore, focuses on whether past or present activities at the facility currently contribute, or have the potential to contribute, to impacts on Willamette River water and sediments. This investigation has been conducted to meet the requirements of the Final McCall Oil and Chemical Corporation Focused Remedial Investigation Workplan, Portland, Oregon, prepared by IT Corporation, November 16, 2000 (Workplan).

3 BACKGROUND

3.1 Synopsis of Site Background

The site is located in the industrialized area of northwest Portland along NW Front Avenue (see Figure 1). It occupies approximately 36 acres on the southwest bank of the Willamette River. The site encompasses six tax lots. Before 1966, most of the land now occupied by the McCall Oil Terminal was submerged beneath the Willamette River (Figure 2). The Port created new land along the Willamette during the mid-1960s by dredging and filling along the shore. This land, including a portion of the subject site, was deeded to the Port by the state of Oregon in 1967. A detailed description of the ownership and operational history of the site is in the Workplan and in the RI Proposal, which is Appendix D to the Workplan. In this report the former GWCC facility is referred to as the Quadra facility.

The property is currently occupied by two separate facilities: MOCC, which operates a marine terminal and asphalt facility, and Quadra, which operates the former GWCC chemical distribution facility. Until 1995, the GWCC facilities consisted of two operating units, the GWCC Technical Center and the GWCC Portland Branch. The Technical Center included the former Chemax operations. In 1995, GWCC's two operating units were merged into the Portland Branch. Current and historical activities associated with the operations of each of these facilities are discussed in detail in chapters two through five of the RI Proposal (Appendix D to the Workplan). McCall purchased the marine terminal property from the Port of Portland in 2004 and now owns all of the property shown on Figure 2.

The site is included in the Willamette Greenway (Greenway) established by the City of Portland to monitor and control land use next to the river. The site and surrounding properties are zoned for heavy industrial use, both within the Greenway on the northwest (i.e., downriver) bank and outside of the Greenway. Surrounding industries include: petroleum bulk distribution terminals, chemical plants, sand and gravel operations, a steel fabrication facility, shipyards, and rail yards.

In the mid-1920s, the Port purchased the property now occupied by MOCC and GWCC as part of an approximately 65-acre parcel that stretched from the lands owned by Union Oil

Company of California (Unocal) on the west, to the Willamette River. Prior to the mid-1940s the property was vacant. In 1946, Pioneer Flintkote Company (Flintkote) purchased two parcels from the Port. Those parcels are currently occupied by Quadra and the MOCC asphalt plant, respectively.

Flintkote manufactured asphalt roofing shingles and tiles on the property from 1947 to approximately 1982. Historical occupation records indicate that Standard Oil Company operated a distribution center at the site during the 1950s (SAFE, 1994). By 1960, Douglas Oil Company (Douglas) occupied this address, and operated an asphalt facility. In 1962, Douglas purchased the facility from Flintkote. Douglas and Flintkote continued to operate their respective facilities until 1982, when both parcels and the improvements were sold to MOCC. Chemax began operations on the former Flintkote site in early 1984. The Portland branch began its on-site operations in late 1985. In 1985, MOCC operated a lube oil distribution facility on part of the asphalt plant site. The lube oil operations were discontinued in 1991.

In the early to mid-1960s, the Port used dredge spoils from the Willamette River channel (primarily fine sand) to create new land along the Willamette River next to the Flintkote and Douglas facilities. As stated previously, this land was subsequently deeded to the Port by the state of Oregon in 1967. In the mid-1970s, MOCC constructed the marine terminal on the filled land.

3.2 RI Goals and Objectives

This section links the overall goals and objectives of the focused RI with objectives previously identified in the Agreement.

3.2.1 Goal of Focused RI

The overlying purpose for the DEQ entering into agreements with property owners along the Willamette River was to address possible upland conditions that may contribute to sediment contamination in the Portland Harbor project area of concern. The investigation at this site therefore focuses on the transport mechanisms and exposure pathways that could contribute to river sediment impacts (i.e., through groundwater and stormwater). The investigation approach evaluates groundwater quality in the upper aquifer as a whole and assesses whether any contaminants detected will pose a risk to the river. Stormwater quality is also evaluated at the site discharge points. In addition, a risk screening evaluation was conducted to assess potential risks to upland site workers, including site occupants, excavation workers, and construction workers (the latter contingent on extensive site redevelopment).

The primary goal of the focused RI is to identify and characterize potential contaminant sources, if any, at the site that could contribute to river sediment impacts or unacceptable risks to site workers. This goal translates to a number of project specific objectives developed for the RI. The following RI objectives were identified in the Workplan.

- characterize groundwater quality in upper aquifer and screen for COPCs
- characterize stormwater quality
- characterize hydrogeology of site to assess dynamics of groundwater flow and contaminant transport
- conduct fate and transport analyses to determine if storm water and/or groundwater pathways have potential current or future unacceptable impact on the river
- conduct source area evaluation(s) if fate and transport analyses indicate potential current or future unacceptable river impact

3.2.2 RI Objectives Defined in Agreement

The Agreement listed a number of generic objectives in Section II of the SOW. These are paraphrased below and then discussed in the context of work already completed. Alignment of these objectives with project-specific objectives and the overlying project goal also is defined where appropriate.

A. Identify and characterize upland hazardous substance source areas.

B. Evaluate contaminant migration pathways from upland to river.

C. Determine nature and extent of affected upland media.

D. Identify potential human and ecological receptors.

E. Collect upland data to allow identification of possible source areas that may impact sediment quality or upland site workers. Risk-based ecological and human health screening levels were developed to facilitate source area identification.

F. Conduct risk assessment.

G. Determine if upland hot spots are present.

H. Achieve adequate data quality for site characterization and risk assessment.

I. Develop information necessary to evaluate and implement necessary source control measures, if needed.

J. Implement necessary source control measures.

Objectives A and B. RI objectives A and B have been largely completed through the efforts of the 1994 Preliminary Assessment (EMCON, 1994b), preparation of the RI proposal (IT, 2000a), and the monitoring that has occurred since 1994. The RI proposal documented the areas of MOCC and GWCC industrial activity and locations of documented releases. This information was an important criterion used in the design of the pre-RI groundwater and storm water monitoring programs. The pre-RI storm water and groundwater monitoring points are downgradient of historic release areas and the most active areas of industrial operations. This RI has largely completed the needed characterization of the potential source areas and the lateral extent of groundwater impacts possibly associated with those sources.

The RI proposal evaluated potential exposure pathways through the conceptual site model (CSM). The CSM presented in the Workplan is still valid. The investigative work described in this report largely completes the evaluation of the stormwater and groundwater pathways to the river.

Objective C. As required in Objective C, the contaminants of interest (COI) identified in the Workplan have been evaluated in this RI.

Objective D. RI objective D has been largely completed through the CSM analysis described in the RI proposal and Workplan. With respect to goals identified for this focused RI, potential receptors include aquatic organisms in the river through the groundwater and surface water pathways. Upland human receptors identified for exposure in the CSM (e.g., industrial on-site workers, construction and trench workers) are also evaluated in this focused RI. Potential impacts to human anglers and fish-eating wildlife, through bioaccumulation pathways, are best evaluated in the context of the regional investigation currently underway as part of the Portland Harbor RI/FS, and will not be discussed herein. A Level 1 Ecological Screening Assessment was completed and is reported herein.

Objective E. Objective E has been met in this RI through the detailed evaluation of the groundwater and storm water pathways to the river. This focused RI has not included an investigation of the river or river sediment as this would potentially be duplicative of activities proposed for the Portland Harbor RI/FS. Any sediment data collected would also lack the necessary context of sediment dynamics and upriver-downriver sediment chemistry data critical to understanding the origin of possible sediment contamination, especially in this highly industrialized area with numerous potential sources.

Objective F. Following agency approval of completion of the RI, Objective F will be met by conducting a human health risk assessment focused on the exposures to occupational, construction, and excavation workers of LNAPL in the vicinity of MW-11, solvent vapors in the vicinity of the drum handling area near EX-1, and arsenic in the site storm sewers. This RI report includes a screening of site groundwater and storm water COI concentrations against ecological and human health criteria for the purpose of identifying exposure pathways that may warrant further evaluation as part of a risk assessment. Depending upon the status of the Portland Harbor investigation and other factors, McCall may elect to conduct the upland human health risk assessment under a separate Voluntary Agreement with DEQ.

Objective G. This RI Report describes the status of the hot spot analysis for groundwater and storm water. A possible petroleum hydrocarbon LNAPL hot spot has been identified on the southern site boundary. Evidence gathered to date indicates that the LNAPL is sourced from a historic Bunker C release at the neighboring Tube Forgings property.

Objective H. Data quality objectives required to meet objective H were specified in the quality assurance and quality control plan in Appendix B of the Workplan. Those objectives have been met.

Objectives I and J. This focused RI has been conducted to gather the data necessary to evaluate source control measures to meet objective I, should the risk assessment indicate such measures are needed. If the risk assessment indicates that source control measures are needed, the feasibility study could identify additional data needs required for the design of source control measures. Any designed source controls would be implemented to meet objective J.

3.3 Summary of RI Reports and Agency Meetings Completed to Date

This section provides a sequential listing of the remedial investigation status reports provided to DEQ and the meetings held with DEQ, since DEQ's approval of the November 2000 Workplan. The list includes the date of occurrence and a summary of the key topics discussed or presented.

April 30, 2001, Focused Remedial Investigation Interim Status Report

This interim status report described the data resulting from the following tasks.

- 44 test borings completed
- laboratory testing of soil and groundwater grab samples from the test borings
- installation of a piezometer near well EX-6 for use during a planned pump test
- water level monitoring
- field slug tests in monitoring wells EX-1, EX-5, EX-7, and MW-4
- laboratory testing of sediment and water samples from stormwater catch basins
- laboratory testing of a composite river sediment sample collected at the outfall from catch basin S-3
- level 1 ecological scoping assessment
- review of historic industrial practices and spill history

May 29, 2001, DEQ Meeting

This meeting was held to discuss the Interim Status Report and conceptual plans for further investigation.

August 1, 2001, DEQ Meeting

This meeting was held to discuss the sale of Great Western Chemical to Quadra Chemical, plus plans and schedule for further investigation.

September 24, 2001, Status Report and Supplemental Investigation Workplan

The Work Plan included six tasks.

1. Phased installation of monitoring wells MW-6 through 13 and Geoprobe borings GP-45 through 55, installation of a piezometer, decommissioning of well EX-6
2. New well development and sampling
3. Sampling all wells
4. Stormwater sampling and testing
5. Well pump tests
6. Reporting

January 14, 2002, Status Report

This report summarized the work completed during the fourth quarter 2001 and work planned for first quarter 2002.

- monthly water level measurements
- installation and sampling of wells MW-6, 7, 8, 9, and piezometer TPZ-2
- completion of Geoprobe borings GP-45 through 55
- laboratory testing of soil and groundwater samples

April 18, 2002, Status Report

Work completed

- installed, developed, and sampled monitoring wells MW-10, 11, 12, and 13
- surveyed all new wells
- March, measured water levels, sampled all wells and stormwater catch basins
- laboratory testing

May 15, 2002, Data Report

This report provided water level data and data from laboratory testing of groundwater and stormwater.

July 15, 2002, Status Report
This report covered the results of the first quarter sampling and the findings from aquifer testing conducted using river tide lag methodology.

July 31, 2002, DEQ Meeting
This meeting was held to discuss the work completed, future tasks and schedule.

October 15, 2002, Status Report

This report discusses the July 31, 2002 meeting and work planned for fourth quarter 2002.

October 24, 2002, DEQ Meeting
A meeting was held with DEQ to discuss the RI report schedule and an evaluation of source control measures.

November 14, 2002, Conceptual Supplemental RI Workplan
This workplan is designed to cover the following data gaps agreed with DEQ.

- extent and source of free product at well MW-11
- exceedance of ambient water quality criteria in groundwater at river edge

This workplan includes plan and schedule to conduct three tasks.

1. characterization of the free product at MW-11 by phased installation of Geoprobe borings and monitoring wells
2. RI report preparation
3. assessment of groundwater to river transition zone near well MW-8

November 21, 2002, DEQ Comment Letter on the November 14 Conceptual Supplemental RI Workplan
This letter included four comments on the conceptual plan to conduct task 3, the assessment of groundwater to river transition zone. DEQ's suggested changes to the conceptual workplan, if implemented, would expand the groundwater to river transition zone evaluation to other site areas beyond well MW-8.

January 15, 2003, Status Report
The report covered work completed during fourth quarter 2002.

- water level measurements October 2
- sampling of all monitoring wells and laboratory testing
- sampling and forensic lab testing of free product from well MW-11
- DEQ meeting
- conceptual supplemental RI work plan submitted to DEQ

January 21, 2003, DEQ Meeting
This meeting was held to discuss DEQ's comments in the agency's November 21, 2002 letter. At the meeting Anchor proposed to use updated EPA surface water quality criteria (including EPA 2002a and 2002b) to screen groundwater quality in shoreline monitoring wells, and 5 times the chronic ambient water quality criteria (EPA, 2002a) to screen storm water. Anchor also suggested using toxicity equivalency factors to evaluate human health risks associated with polycyclic aromatic hydrocarbons (PAHs). DEQ agreed to evaluate these proposals.

January 23, 2003, DEQ E-mail
Tom Gainer requests that preparation of the RI report not be delayed while DEQ reviews the proposals made during the January 21 meeting.

April 15, 2003, Status Report
This report discusses the January 21, 2003 meeting and work planned for second quarter 2003.

June 2003, Remedial Investigation Report
The first draft of this report was submitted to DEQ.

July 14, 2003, Status Report
This report discusses the submittal of the June 2003 Remedial Investigation Report and plans for investigation of the LNAPL plume.

July 30, 2003, DEQ Comment Letter
DEQ provided comments on the June 2003 Remedial Investigation Report.

October 15, 2003, Status Report

This report discusses the results of the October 6, 2003 investigation of the LNAPL plume.

October 16, 2003, Response to July 30, 2003, Comment Letter, Remedial Investigation Report

This response to DEQ's July 30, 2003 comment letter on the remedial investigation report includes responses to DEQ's comments, plans for supplemental site investigations including installation of monitoring wells MW-14 and MW-15, and a proposed groundwater monitoring plan.

November 13, 2003, DEQ Comment of Anchor's October 16, 2003 Response Letter

This letter provides DEQ's comments on Anchor's October 16, 2003 response letter and accepts the proposed groundwater monitoring plan with minor m odifications.

January 15, 2004, Status Report

This report discusses the results of the October 6, 2003 investigation of the LNAPL plume and the installation of monitoring wells MW-14 and MW-15

April 15, 2004, Status Report

This report discusses the February 2004 monitoring event and includes the February 2004 sampling results, and well logs for monitoring wells MW-14 and MW-15.

July 13, 2004, Status Report

This report discusses that Anchor is currently revising the Remedial Investigation Report.

3.4 Site Conditions

3.4.1 Conceptual Site Model

The CSM identifies the sources, pathways and receptors that were considered in designing the focused Workplan (Figure 3). Although MOCC and Quadra operate independently, the CSM covers both facilities because the two facilities are adjacent to each other, and have potentially overlapping exposure pathways to the Willamette River.

The CSM illustrates the site's potential exposure pathways from potential source areas to potential receptors. The CSM considers all media including: soil, groundwater, surface water, sediment, and air.

Five classes of potential receptors were identified on Figure 3 on the basis of current and reasonably likely future land use. The site and surrounding area are currently used for industrial purposes, are zoned industrial, and are likely to remain industrial for the foreseeable future.

Of primary concern to this focused RI are the ecological receptors of the Willamette River. For the purposes of the CSM, all flora and fauna potentially exposed to river water or sediments are grouped under the heading of ecological receptors. Potential secondary contaminant sources to these receptors are groundwater and storm water (i.e., surface water) that discharge to the Willamette River water and sediments. These are two potentially complete pathways that are addressed in this RI Report.

The CSM also identifies some exposure routes for trench workers, construction workers, and industrial (occupational) on-site workers. As appropriate, these exposure routes are assessed in the upland areas. Specifically, occupational workers may come in contact with surface soils (0 to 3 feet below grade), volatilization to outdoor air, and vapor intrusion to buildings. Construction and excavation workers may come in contact with subsurface soils. However, construction and excavation workers are not likely to contact groundwater because the water table lies at 12 to 20 feet below grade, i.e. below the practical limits of excavation for this Site. Utility workers may also contact catch basin sediments during cleanout or beach sediments during outfall maintenance.

Recreational users of the Willamette River are unlikely to contact sediments and shallow river water adjacent to the Site during swimming and wading activities because the Site and surrounding properties are industrial in nature with no public access facilities. These are therefore considered insignificant pathways. Fish-eating humans and wildlife may be exposed to contaminants which have bioaccumulated in fish tissue; however, bioaccumulation is a watershed-scale issue that is best evaluated in the context of the regional investigation currently underway by the Lower Willamette Group.

3.4.2 Contaminants of Interest (COIs)

The site contaminants of interest (COIs) were selected on the basis of chemicals that were (1) historically or currently used or stored at the facility, (2) detected in adjacent Willamette River sediment samples, or (3) detected in site storm water. The classes of COIs historically or currently used or stored at the site include:

- chlorinated VOCs
- total petroleum hydrocarbons (TPH) as diesel and oil
- polynuclear aromatic hydrocarbons (PAHs)
- metals (in particular, arsenic, chromium, and copper)

Total petroleum hydrocarbons have been tested at the site for the purpose of identifying and characterizing potential upland source areas. TPH concentrations at the site were also screened using DEQ's "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, 2003). The DEQ guidance was also used to evaluate toxic components of diesel- and oil-range hydrocarbons in soil and groundwater, in particular PAHs.

Because of the extended history of petroleum storage, handling, and shipping at the various bulk terminals in the vicinity of the site, the following COI's were included in the investigation, although no significant on-site sources of these chemicals are known:

- total petroleum hydrocarbons (TPH) as gasoline
- benzene, toluene, ethylbenzene, xylenes (BTEX), and related target volatile compounds per DEQ (2003)

Chlorinated VOCs have not been identified as Willamette River target compounds by DEQ, but chlorinated VOCs have been detected in groundwater at the site. These have therefore been investigated as COIs for the site.

During the Portland Harbor Sediment Investigation Report (Weston, 1998), EPA's contractor collected and analyzed sediment samples from six Willamette River locations near the site. Sample locations SD 114, 117, 118, 120, and 123 are shown on Figure 2. Location SD-115 is located further north, just beyond the area covered by Figure 2. The Weston investigation obtained surface sediment samples (0 to 10 cm depth) at all locations. Subsurface core samples were also obtained at locations SD 117 and SD 120 (0 to 90 cm depth).

The Weston samples were tested for inorganic, semivolatile organic compounds (SVOCs), VOCs, pesticides, and organotin compounds. On pages 2 and 3 of the Agreement, the agency listed the following compounds that exceeded baseline concentrations established for the Portland Harbor Study Area:

Surface Sediment Constituents Exceeding Baseline Values:

aluminum	zinc
cadmium	4-methylphenol
cobalt	butyl benzyl phthalate
lead	di-n-octyl phthalate
mercury	

Subsurface Sediment Constituents Exceeding Baseline Values:

aluminum	4-methylphenol
barium	dibenzofuran
cobalt	LPAH
mercury	HPAH
zinc	

With one exception, all of the constituent concentrations were well below dredged material screening levels (USACE et al., 1998). The exception was the shallow sample from SD 120 that had a 4-methylphenol concentration of 880 µg/kg. The dredged material screening level for this compound is 670 µg/kg. Of these chemicals, the four SVOCs and PAHs (see above) were retained for testing at the site. None of the listed metals are part of any process nor are they stored at the MOCC/GWCC facility.

Cadmium, lead, and zinc were added to the list of COIs, not on the basis of the Portland Harbor sediment evaluation, but rather because of their occurrence in site storm water. Three additional metals—copper, chromium, and arsenic—were also selected as COIs because they were previously used in the production of wood-treating chemicals (CCA) on site.

In summary, the following COIs were identified for investigation during this focused RI:

- Chlorinated VOCs
- TPH as diesel, oil, and gasoline
- PAHs
- BTEX
- Metals (arsenic, cadmium, chromium, copper, lead, and zinc)
- Miscellaneous SVOCs (4-methylphenol, butyl benzyl phthalate, di-n-octyl phthalate, dibenzofuran)

4 INVESTIGATION

4.1 Beneficial use Evaluation

A groundwater and surface water beneficial use evaluation was conducted as part of this investigation. The site and surrounding area are zoned for commercial and heavy industrial uses. The site and surrounding properties are currently in heavy industrial use including, chemical packaging, asphalt manufacturing, petroleum bulk terminals, steel pipe manufacturing and aggregate storage. The photobase map on Figure 1B shows the various industries currently in the vicinity of the site. The current zoning and industrial use on the site and surrounding properties are reasonably likely to continue for the foreseeable future. There are no residences adjacent to or near the site. Industrial workers currently employed by McCall Oil and Chemical and Quadra are the only people that could possibly be exposed to COPCs on the upland portion of the site.

The site and surrounding industrial area obtain their drinking water and industrial water supplies from the City of Portland municipal supply system. There are some industrial supply wells in the northwest industrial area, but none are located onsite or downgradient from potential onsite source areas. Site groundwater discharges to the Willamette River, so there is no possible pathway from the site to any existing groundwater supply well. Because site industrial workers and industrial workers on adjacent properties do not use groundwater for potable purposes, there is no possible drinking water pathway for site groundwater.

There are no surface water bodies, such as ponds, lakes, marshes, or streams on the upland portion of the site. The Willamette River is the eastern boundary of the site and the river is the regional discharge boundary for groundwater. Site storm water discharges to the Willamette River.

The only identified beneficial use for site groundwater and storm water results from their role as recharge sources for the adjacent Willamette River. As sources of recharge to the river, site storm water and groundwater have the same beneficial use to the river as the other upland properties in the Portland Harbor CERCLA site.

4.2 Ecological Level 1 Scoping Assessment

The Ecological Level 1 Scoping Report completed as part of this RI was prepared by IT Corporation, August 8, 2001. That report is in Appendix A. The report concluded that: at present, there are insufficient data to eliminate the possibility that site-related chemicals in groundwater or storm water could migrate to surface water of the Willamette River where they could be encountered by aquatic ecological receptors. As a result, a Level 2 Screening Assessment (DEQ, 1999) may be required to evaluate the potential ecological risks associated with groundwater or storm water discharge to the Willamette River. No further ecological evaluations are recommended for upland soil at the site. All available evidence indicates that there are no significant pathways by which important terrestrial ecological receptors could be exposed to site-related chemicals that are present in soil.

4.3 Supplemental Remedial Investigation Work Scope

McCall met with DEQ on May 29, 2001 to discuss the April 30, 2001 Focused Remedial Investigation Status Report and conceptual plans for further investigation. Another meeting was held with DEQ on August 1, 2001 to discuss the sale of Great Western Chemical to Quadra Chemical, plus plans and schedule for further investigation. McCall provided DEQ with a September 24, 2001 written Status Report that included a Work Scope to do the DEQ requested Supplemental Remedial Investigation. That investigation was proposed to be conducted in phases covering the periods of the fourth quarter 2001 and first quarter 2002. In total the supplemental investigation was proposed to include 9 GeoProbe borings, 8 monitoring wells, monitoring well sampling, storm water testing, aquifer testing, data management, and reporting. Sections 4.4 and 4.5 describe the work completed and findings from the supplemental RI investigation.

4.4 Groundwater Pathway

This report provides all of the RI data collected to date. Logs for all of the GeoProbe borings and logs for all of the site monitoring wells are in Appendix B. The work completed and findings for the groundwater and storm water pathways are discussed in Sections 4.4 and 4.5. Sections 4.4.1 and 4.5.1 describing work completed cover the investigative period from April 2001 to the present. RI work completed prior to April 2001 was described in the April 30, 2001 Focused Remedial Investigation Interim Status Report (IT Corporation).

4.4.1 Groundwater Work Completed

4.4.1.1 Test Borings

GeoProbe borings GP-45 through 55 were completed November 14 and 15, 2001. GeoProbe borings GP-56 through GP-63 were installed on October 6, 2003. The groundwater and soil sampling rationale for the location of the borings and monitoring wells is shown on Table 1. The table subdivides the locations into three main categories; potential source areas from McCall Oil & Chemical Corporation activities, from former Great Western Chemical (now Quadra) operations, and from upgradient off-site source areas. Each of the boring and well locations is assigned to a potential source area in one of the three operational areas.

For example, test borings GP-45, 46, 47, and 54 through 63 were located to define the boundary of petroleum LNAPL that had been encountered at GP-31 on the southern property boundary. Borings GP-48, 49, and 50 were located to define the extent of diesel and fuel oil detected in vadose zone soil at GP-9. The GP-9 soil data are shown on Table 9. Borings GP- 51, 52, and 53 were installed to determine the extent of groundwater impacts from the former Chemax CCA wood treatment chemical formulation operation.

The GeoProbe logs in Appendix B show that the boring depths typically ranged from 16 to 24 feet below ground surface (bgs). The field drilling and sampling methods met the requirements of the Workplan. Continuous soil samples were obtained at all GeoProbe boring locations from the surface to the bottom of the boring.

Table 2 lists the GeoProbe borings where groundwater grab samples were obtained for laboratory testing and lists the analytes tested. Groundwater grab samples were obtained at all but thirteen of the borings. Groundwater grab samples were not obtained at borings GP-48, 49, and 50 because the goal of those borings was to sample and test vadose zone soils to determine the extent of diesel and oil contamination detected in boring GP-9. Groundwater grab samples were not obtained at borings GP-54 through 63 because these borings were used to obtain soil samples for the purpose of visually evaluating the extent of LNAPL detected in borings GP-31, 45, and 47.

The groundwater analytes tested varied depending upon the purpose of the borings. The samples from GP-45, 46, and 47 were tested for gasoline, diesel, and oil to determine the extent of petroleum LNAPL detected at GP-31. The samples from GP-51, 52, and 53 were tested for total and dissolved arsenic, chromium, and copper because of the intent to evaluate groundwater impacts from historic CCA releases from the former Chemax production area.

With the exception of borings GP-48, 49, and 50, the Workplan specified that soil samples from the GeoProbe borings were not to be laboratory tested, unless field examination of the samples indicated the presence of petroleum hydrocarbons or other contaminants that had not previously been identified in the area being investigated. Representative soil samples from borings GP-48, 49, and 50 were tested for gasoline, diesel, and oil. The sampling matrix for upland soil samples is on Table 3.

4.4.1.2 Monitoring Wells

The new monitoring wells were installed in phases. Wells MW-6, 7, and 8 were installed on September 26, 2001. Table 1 shows that MW-6 and 7 were installed to monitor the distal end of the chlorinated solvent plume that is sourced near the former solvent drumming area on the former Great Western Chemical property. MW-8 was located to serve two purposes; one was to monitor possible releases from the McCall oil terminal tank farm, and the second was to define the boundary of the chlorinated solvent plume.

Well MW-9 was installed on November 16, 2001. The well was placed to monitor groundwater quality entering the west side of the site from possible offsite source areas. An attempt was made to install well MW-10 on November 16, but the installation was not completed because the auger drill penetrated the top of a concrete sanitary sewer that had not been properly located by the City of Portland. The city subsequently backfilled the hole and repaired the sewer.

Wells MW-10, 11, 12, and 13 were installed on January 7, 2002. MW-10 was placed to monitor groundwater that is entering the west side of the site from possible upgradient sources. Well MW-11 was placed to monitor the area of petroleum LNAPL that had been detected by GeoProbe borings GP-31, 45, 46, 47, 54, and 55. Well MW-12 was placed east of MW-11 along the southern site boundary to monitor groundwater entering the site from possible upgradient source areas to the south. Well MW-13 was placed in the middle of the McCall terminal tank farm to monitor groundwater quality and provide a hydrology data point in the tank farm area.

Wells MW-14 and MW-15 were installed on December 31, 2003. Well MW-14 was placed to monitor groundwater near the shoreline at the northwest corner of the site. Well MW-15 was placed to monitor the area directly downgradient of petroleum LNAPL that had been detected by GeoProbe borings GP-31, 45, 46, 47, and 54 through 63.

The wells were constructed according to the Workplan, with 2 inch schedule 40 PVC screen and casing. The screen depths were designed so that the top of the water table would be within the screen zone throughout an average year of seasonal water table fluctuations. The well construction details are shown on the logs in Appendix B and the well measuring point elevations are listed on Table 4.

The screen of each of the new wells was developed within one week of installation as required in the Workplan. Each of the new wells was sampled within one week of screen development, and the samples tested for the analytes shown on Tables 1 and 2.

Monthly water level measurements were made in all site monitoring wells and at the river staff gauge from December 2000 through March 2002. Additional measurements were made in October 2002 and February 2004. The hydrology data, including river level measurements, are on Table 4.

4.4.1.3 *Aquifer Tests*

On the recommendation of DEQ, the site water table aquifer hydraulic properties were evaluated by measuring groundwater fluctuations caused by river level changes. The Willamette River level fluctuates daily in response to ocean tides transmitted from the Columbia River.

On June 3, 2002, pressure transducers were installed in monitoring wells EX-5, MW-6, MW-7, and at the Willamette River gauge site, WG-1. Those well locations were selected to be representative of the possible range of hydrogeologic properties across the site, and the wells were pre-approved by Don Pettit, RG, Oregon DEQ. The transducers were removed on June 11. The transducers were set to record water level changes at one minute intervals throughout the 8 day period.

The test data, calculations, and findings from this test were reported to DEQ in a July 15, 2002 Status Report, that is provided in Appendix C of this report.

4.4.1.4 *Water Quality Testing*

During this RI there have been three comprehensive groundwater monitoring events that included all the site monitoring wells that existed at the time of each event. Those events occurred in December 2000, March and October, 2002. The event dates were selected to be representative of seasonal low and high water table conditions at the site. Each of the new monitoring wells MW-6 through 13 were sampled at least three times during this RI. For those new wells, the first sampling event occurred within one month of well installation, and was not necessarily time coincident with one of the three comprehensive sampling rounds described previously. Monitoring wells EX-1, EX-2, EX-3, EX-4(MW-2), EX-7, MW-1, MW-3, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-12, MW-14, and MW-15 were sampled in February 2004, according to the sampling plan (Table 15) approved by DEQ in a letter dated November 13, 2003.

Groundwater from the monitoring wells was laboratory tested for the target analyte COPCs that were established in the Workplan. The water quality data are in the spreadsheets presented in Tables 5, 6, 7, and 8.

4.4.1.5 Soil Testing

Upland soil and catch basin samples were collected and laboratory tested as specified in the Workplan. Representative soil samples obtained from the GeoProbe test borings that showed visual or olfactory evidence of contamination were laboratory tested for the target analytes listed on Table 3. Samples of sediment were obtained from the stormwater catch basins at locations S-1, 2, 3, and 4 on December 15, 2000. The catch basin sediment samples were laboratory tested for the target analytes shown on Table 3.

4.4.2 Groundwater Findings

4.4.2.1 Groundwater Flow System

On the basis of soil and bedrock samples obtained from the GeoProbe and monitoring well borings drilled during this RI, there are three geologic units of interest underlying the uplands at this site. The uppermost geologic unit is dredge fill derived from the Willamette River. The dredge fill overlies river alluvium. The dredge fill was placed in the 1960's by the Port of Portland in the area where McCall later built the marine terminal above ground tank farm. The alluvium overlies basalt bedrock. The combined thickness of the dredge fill and alluvium is approximately 75 feet, based on the depth to basalt bedrock at borings GP-41, 42, 43, and 44. Because the dredge fill and alluvial sediments both consist primarily of fine to medium sand and silt, the contact between the two units is difficult to identify in borings.

Logs from site borings have not identified a consistent lithologic boundary between the dredge fill sediments and the underlying alluvial sediments. Both units are quite sandy and contain silty-sand or silt interbeds. Although some boring logs indicate that the underlying alluvium is siltier than the dredge fill sediments, the water level data do not indicate that groundwater in the dredge fill is consistently perched on the underlying alluvium. For these reasons the dredge fill sediments and alluvial sediments are considered to be one hydrogeologic unit. For the purpose of this report the dredge fill and alluvium are termed the alluvial aquifer.

Five subsurface geologic cross sections are shown on Figures 6A through 6E. The section locations are shown on Figure 2. The sections identify the type of sediment encountered in the GeoProbe and monitoring well borings. Section B-B' on Figure 6B also shows the full thickness of the alluvial aquifer down to basalt bedrock.

On a regional basis the Willamette River is the discharge boundary for shallow and deep groundwater. For this project we are concerned primarily with characterizing the groundwater flow system in the alluvial aquifer overlying basalt bedrock. The properties of the COIs and water quality data collected to date indicate that only groundwater in the upper portion of the alluvial aquifer has water quality impacts. The organic COIs that have been detected in site groundwater have specific gravities less than one, except the chlorinated VOCs. Therefore, we expect to encounter those light COIs in groundwater in the upper portion of the alluvial aquifer. Four borings were drilled to bedrock in the chlorinated VOC plume to look for evidence of chlorinated VOC DNAPL. Groundwater from those borings was tested for chlorinated VOCs from multiple depths down to bedrock. No evidence of DNAPL was detected. The results from those borings, GP-41, 42, 43, and 44 were reported in the April 2001 Status Report.

Groundwater potentiometric surface contour maps were prepared for March and October, 2002, Figures 4 and 5, respectively. The contour patterns on these maps indicate that groundwater in the alluvial aquifer flows northeast to the Willamette River. Comparison of the groundwater elevations shown next to the monitoring wells on Figures 4 and 5 indicates that there was up to two feet of difference in groundwater elevation between the October dry season and March wet season conditions. The flow pattern did not change significantly from the dry to wet season in 2002.

Groundwater in the alluvial aquifer is recharged by a combination of infiltration of rainwater in the unpaved portions of the facility, and underflow from areas to the south (Tube Forgings) and to the west (Chevron Asphalt and Willbridge terminals). The entire facility is paved, with two exceptions. The rectangular shaped area between the Quadra Chemical facility and the McCall Marine Terminal has a gravel surface. Although it is unpaved, vehicle traffic has compacted the gravel and the resulting low permeability causes rainfall to runoff to the catch basins in this area. Stormwater from those catch basins flows to the McCall terminal oil water separator located at S-4. The area within the McCall terminal above-ground tank farm is also unpaved. Some infiltration may occur in this area, although much of the rainwater that falls into the tank farm runs off and is routed to the oil water separator at S-4. The alluvial aquifer is also temporarily recharged near the shoreline when the Willamette River rises due to daily tidal, storm, and seasonal fluctuations. River level induced groundwater elevation fluctuations can be seen by reviewing the hydrographs from the aquifer tests conducted at the site.

The hydraulic conductivity of the alluvial aquifer was determined by field testing at monitoring wells EX-5, MW-6, and MW-7. A time lag method was used for these tests at the suggestion of DEQ. This method uses the time lag between river level fluctuations and the river induced groundwater level fluctuations to determine the alluvial aquifer hydraulic conductivity. The data and results of the field tests were reported in the July 15, 2002 Status Report. The horizontal hydraulic conductivity values determined for the three wells were 0.005 ft/minute for MW-6, 0.003 ft/minute for EX-5, and 0.16 ft/minute for MW-7.

4.4.2.2 Groundwater Quality

The groundwater quality data from the first phase of the RI was provided in the April 30, 2001 Interim Status Report. That report used tables and maps to display the range of COPC concentrations that had been detected in GeoProbe groundwater grab samples and in groundwater samples from the site monitoring wells. A primary purpose of that data analysis was to use the GeoProbe groundwater quality data to identify areas where monitoring wells should be installed. Based on the GeoProbe data the supplemental RI included the installation of monitoring wells MW-6 through MW-13, as described in section 4.3.1.2. The groundwater quality testing that has occurred in the supplemental RI was described in section 4.3.1.4.

For the fourth RI groundwater monitoring event (February 2004) a modified sampling and testing plan was implemented, as agreed with DEQ. The modified sampling and testing plan is summarized on Table 15.

This section describes the general occurrence and concentration time trends of the primary COI groups, Total petroleum Hydrocarbons, PAHs, SVOCs, VOCs, and metals. When reviewing the tabulated water quality data, note that detections are shown in bold.

Total Petroleum Hydrocarbons

The data on Table 5 show that petroleum hydrocarbons have been detected at least once in every monitoring well at the site with the exception of newly installed monitoring well MW-15. The total petroleum hydrocarbon (TPH) detections have been in the gasoline, diesel, and heavy fuel oil ranges. The groundwater concentrations for each hydrocarbon range are generally less than one mg/l, but since RI monitoring began in 2000, wells MW-1, MW-3, MW-4, MW-7, MW-8, MW-11, MW-12, and MW-13 have had concentrations exceeding 1 mg/l.

Wells MW-11 and MW-8 have the highest TPH concentrations.

A petroleum Light Non Aqueous Phase Liquid (LNAPL) has been detected in the vicinity of well MW-11. Forensic testing has identified the LNAPL as a residual Bunker C or diesel fuel, and the forensic test report for LNAPL from well MW-11 is in Appendix F. The LNAPL was also detected in GeoProbe borings GP-31, 45, 46, 47, 54, 55, 56, and 59 near well MW-11. The LNAPL was not detected in GeoProbe borings GP-57, 58, 60, 61, 62, and 63 which were advanced to delineate the onsite extent of the plume. The estimated footprint of the LNAPL plume on McCall property was defined using the GeoProbe boring results and the estimated boundary is shown on Figure 2. Review of the Tube Forgings UST file shows that a Bunker C release occurred near the McCall property boundary with Tube Forgings. The shape and location of the LNAPL plume on McCall property, as shown on Figure 2, implies that the plume extends onto the Tube Forgings property. The forensic evidence, LNAPL location, and geometry all indicate that the LNAPL is sourced from the historic Tube Forgings Bunker C release.

At well MW-8, petroleum hydrocarbons were logged in sand at a depth of 30 ft bgs when the well was being installed, but LNAPL has not been detected during subsequent sampling of the well. This well is adjacent to the marine terminal above-ground tank farm, so the tank farm is a potential source for the hydrocarbons detected in well MW-8. There is no record of a specific release that occurred in the NW corner of the tank farm. However, there is a surface depression in this corner of the tank farm, several feet below the surrounding grade; the depression has been observed to pool runoff water which could subsequently infiltrate beneath the berm of the tank farm. Documented releases in the marine terminal tank farm were identified in Appendix C of the April 30, 2001 Interim Status Report.

Time trends of total TPH concentrations in groundwater have been plotted for the monitoring wells and are located in Appendix D. For the oldest wells, the TPH data go back as far as 1994. These plots do not show any discernible trends (either downward or upward) in TPH groundwater concentrations over time. For most of the wells the total TPH concentrations vary within the range of 0.1 to 1 mg/l. For the newer wells, such as MW-8, the period of record is too short to draw any significant conclusions.

PAHs

The data on Table 6 shows that PAHs have been detected in all site monitoring wells. The PAHs are components of the petroleum hydrocarbons in groundwater described in the previous section. Table six shows that the LPAH and HPAH compounds have been individually quantified for this investigation. The table also shows the total LPAHs and HPAHs concentrations for each well at each monitoring event.

The PAH concentrations in groundwater are generally at the trace level or extremely low, with total LPAH and HPAH concentrations less than 1 ug/l at all wells except MW-6, 8, 9 and 11. The highest concentrations of PAHs are in wells MW-8 and

MW-11, which is consistent with the elevated petroleum hydrocarbon detections in those wells.

Maximum and average benzo(a)pyrene (BAP) concentrations in groundwater are displayed next to the site wells on Figure 7. Benzo(a)pyrene has not been detected in all monitoring wells. The concentrations in Figure 7 are further discussed in the groundwater risk screen analysis in section 4.6. For those locations where BAP was not detected, a concentration equal to one half of the method detection limit is shown as the average concentration.

Time trend plots of total LPAH and HPAH concentrations are in Appendix D. Concentrations of the LPAHs and HPAHs seemed to generally increase between the October 2001 and March 2002 events, but there was no general concentration trend from March 2002 to February 2004.

SVOCs

Four SVOCs are COIs for this site, 3- and 4-methylphenol (co-elution), dibenzofuran, butyl benzyl phthalate, and di-n-octyl phthalate. The SVOC groundwater quality data are on Table 6.

Trace concentrations of 3-and 4-Methylphenol were detected in wells EX-2, EX-3, EX-5, and MW-6. Wells MW-8 and MW-12 had concentrations between 1 and 2 ug/l and well MW-13 had a concentration of 28 ug/l. That concentration at MW-13 was measured in the first sample obtained following installation of well MW-13. The concentrations were 1.5 and 0.4 ug/l for the later March and October 2002 samples, so the 28 ug/l concentration is not considered representative.

Trace concentrations of Dibenzofuran were detected in MW-8, MW-11, and MW-13.

Trace concentrations of Butyl Benzyl Phthalate were detected in wells EX-7, MW-1, MW-5, MW-8, MW-9, and MW-10. There were no detections of Di-n-octyl Phthalate in groundwater.

VOCs

Table 7 shows all of the VOC groundwater quality data obtained at the site since 1994.

Two areas of chlorinated solvent groundwater contamination are shown on Figure 8. The average and maximum concentrations of representative VOC compounds are displayed at each Figure 8 well location. Those compounds are further discussed as part of the risk screen analysis presented in section 4.3.2.3.

The largest area of contamination represents a plume that originates near well EX-1 in the former solvent drumming area and extends downgradient to wells MW-7 and MW-8 near the river. The plume trend and geometry is consistent with a source area near EX-1 and a northerly groundwater flow direction. The location of the plume boundary is estimated from the groundwater quality data from the monitoring wells and GeoProbe groundwater grab samples. The GeoProbe data are also in Table 7, and the GeoProbe data were graphically displayed on Figure 6 of the April 2001 Interim Status Report. The VOC compounds and concentrations that occur in the downgradient wells near the river are consistent with the degradation products that would be expected from breakdown of the VOC compounds in wells EX-1 and MW-6.

The second area of contamination includes monitoring wells MW-1, 2, 3, 4, and 10. This area of contamination may be a plume that has developed from a single source, or it may represent commingled plumes from multiple sources. The combination of VOC compounds at each well, their concentration, and the well locations suggest that more than one source, including an offsite source, may be involved. The VOCs at MW-10 may be sourced from offsite because MW-10 is located upgradient of any known on-site source areas. PCE has not been detected at well MW-10, but is present in wells MW-1 and MW-2, suggesting that the contamination at MW-10 is from a different source. The concentrations and types of VOC compounds at MW-3 and MW-4 suggest that they are degradation products of the VOCs that are found in wells MW-1 and MW-2.

BTEX compounds were also detected at very low concentrations in well MW-11. Other than a few trace level detections of toluene at monitoring wells EX-3, MW-1, MW-7, and MW-12, this monitoring well is the only one on-site with detections of BTEX compounds, another indication that the LNAPL at this location is sourced from offsite.

Metals

Monitoring wells MW-1, 2, 3, 4, and 5 were installed in 1993 as part of the 1993 cleanup of the former chromated copper arsenic (CCA) formulation facility that operated from 1984 to 1986 at the Chemax portion of the former Great Western Chemical Corporation. That cleanup was reported in the Great Western Chemical Company, Technical Center Facility, 5700 NW Front Avenue, Portland, Oregon Soil Cleanup and Groundwater Monitoring Report, prepared for Great Western Chemical Company, March 31, 1994, by EMCON Northwest, Inc. That report was also provided to DEQ as Appendix L to the Preliminary Assessment of McCall Oil and Chemical Company and Great Western Chemical Company, NW Front Avenue Properties, Portland, Oregon, ECSI ID #134, Volume 3, by EMCON Northwest, Inc., April 5, 1994.

For the first three groundwater RI sampling events, monitoring wells MW-1, 2, 3, 4, 6, 7, and 8 were tested for arsenic, chromium, and copper to determine the extent and concentration of residual CCA components remaining in groundwater near the former CCA facility. Both total and dissolved metals concentrations were measured. All of the wells tested had detections of all three CCA compounds in total and dissolved forms. This is expected, since these metals naturally occur in shallow groundwater in Western Oregon (U.S. Geological Survey, 1999). Well MW-1 had the highest average dissolved copper concentration of 280 ug/l. However, downgradient wells MW-4 and MW-7 had average dissolved copper concentrations of 0.8 and 1.0 ug/l, respectively. MW-1 also had the highest average dissolved total chromium concentration of 3.93 ug/l. Well MW-3 had the highest average dissolved arsenic concentration of 43.9 ug/l. Downgradient well MW-4 had an average dissolved arsenic concentration of 13.1 ug/l.

For the fourth groundwater monitoring event (February, 2004) DEQ requested that additional wells be tested for arsenic to help determine arsenic background concentrations and evaluate potential impacts to the Willamette river (Table 15). For that sampling round groundwater from the following additional wells was tested for total and dissolved arsenic: EX-1, EX-2, EX-3, EX-7, MW-5, MW-9, 10, 12, 14, and 15. The arsenic data are on Table 8.

4.5 Storm Water Pathway

4.5.1 Scope of Storm Water Sampling Program

4.5.1.1 Storm Water BMPs

Stormwater BMPs. McCall maintains the site storm water system using the following best management practices (BMPs).

- **Annual catch basin cleaning.** McCall conducts annual cleaning of all stormwater catch basins on the site, including those located on the Quadra facility.
- **Catch Basin Particulate Filters.** McCall maintains particulate filters on the catch basins at the site. The filters are inspected on a regular basis and replaced if needed.
- **Automated Monitoring of the McCall Oil Water Separator.** McCall is using an ISCO sampler at outfall location S-4 (Figure 2). The sampler keeps a record of stormwater flows and automatically obtains weekly stormwater samples for NPDES testing. The sampler is installed just downgradient of the oil water separator at location S-4.

4.5.1.2 Storm Water

The RI Work Plan required testing of storm water from three catch basins S-1, 2, and 3, and the McCall terminal oil water separator, designated S-4 (Figure 2). Storm water was sampled on several dates as shown on the tables listed in section 4.5.2.1. Most of the catch basins were sampled on December 20, 2000 and March 6, 2000.

However, sampling access issues required Anchor to also sample S-3 on February 15, 2001 and S-4 on April 9, 2002. At least two storm water samples have been tested from sample stations S-1 through S-4. Storm water samples were tested for the target analytes listed on Table 2. The results of the December 2000 effort were reported in the April 30, 2001 Interim Status Report.

4.5.1.3 *Catch Basin Sediment*

The RI Work Plan required testing of catch basin sediment for the target analytes listed on Table 3. Catch basin sediment samples were obtained on December 15, 2000, and the testing results were reported in the April 2001 Interim Status Report.

4.5.1.4 *River Sediment at Outfall*

A river sediment sample was also collected on December 15, 2000. The sample was composited from three discrete sediment samples obtained from the river bank scour point where the S-3 catch basin outlet discharges to the bank. The sample was designated S3-01C and the sample location is on Figure 2. The sample was tested for the target analytes listed on Table 3 and the results were presented in the April 2001 Interim Status Report.

4.5.2 Storm Water Findings

4.5.2.1 *Storm Water and Catch Basin Sediment Quality*

The storm water quality and sediment quality data are summarized in the following tables. Detections are highlighted on the tables.

- Storm water total petroleum hydrocarbons-Table 5
- Storm water PAHs and SVOCs-Table 6
- Storm water metals-Table 8
- Catch basin sediment total petroleum hydrocarbons-Table 9
- Catch basin sediment PAHs and SVOCs-Table 10
- Catch basin sediment metals-Table 12

The storm water TPH data on Table 5 are somewhat inconsistent, with 1.1 mg/l gasoline detected in S-1 from the December 2000 sampling event, but no other hydrocarbons detected in S-1 in the December 2000 or March 2002 events. Gasoline was also detected at 0.13 mg/l at S-2 in the March 2002 sample, but no other hydrocarbons were detected in S-2 at that event or the December 2000 event. Gasoline and diesel were detected in S-3 at 1.30 and 0.510 mg/l respectively in the 2000 event, but only diesel was detected in S-3 at 0.110 mg/l in the 2002 event. Gasoline and diesel were detected at S-4 for both events; with concentrations ranging from 0.220 to 0.270 mg/l gasoline and from 0.280 to 1.30 mg/l diesel. Heavy fuel range hydrocarbons were detected at a concentration of 0.550 mg/l at S-4 in the April 2002 sample. The 10 mg/l oil and grease NPDES limit for the Quadra Chemical and McCall Oil storm water permits were not exceeded at any of the sample points.

Very low concentrations of PAHs were detected in all of the storm water samples tested from all four sample stations (Table 6). Very low concentrations of the SVOC target analytes 3-and 4-methylphenol, dibenzofuran, and butyl benzyl phthalate were also detected in the storm water samples from all four sample stations. Di-n-octyl phthalate was not detected in any of the storm water samples.

The target analyte metals were detected in all of the storm water samples tested (Table 8). The NPDES storm water permit limits for copper (0.1 mg/l), lead (0.4 mg/l), and zinc (0.6 mg/l) were not exceeded in any of the samples.

Gasoline, diesel, and heavy fuel oil range hydrocarbons were detected in the sediment samples obtained from catch basins S-1, 2, and 3 (Table 9). A sediment sample was not obtained for testing from station S-4, since the oil/water separator is designed to capture storm water sediment and prevent sediment release to the river. A trace detection of heavy fuel oil range hydrocarbons was detected in the river sediment sample S3-01C.

PAHs were detected in the sediment samples obtained from stations S-1, 2, 3, and S3-01C (Table 10). All of the target SVOCs except di-n-octyl phthalate were detected in the sediment samples from catch basins S-1, 2, and 3. A trace concentration of di-n-octyl phthalate was detected in the river sediment sample from station S3-01C.

All target metal analytes were detected in the three catch basin sediment samples S-1, 2, 3, and in the river sediment sample, S3-01C.

4.6 Risk Screening Evaluation

[NOTE: RISK SCREENING EVALUATIONS FOR ALL MEDIA WERE CONSOLIDATED INTO THIS SECTION]

A risk screening evaluation has been performed to determine if the key contaminant pathways to the river have been sufficiently characterized to support the evaluation of source control measures. Of particular concern to this focused RI are the aquatic organisms in the Willamette River. For the purposes of the CSM, all flora and fauna potentially exposed to river water or sediments are grouped under the heading of ecological receptors. In addition, a risk screening evaluation of soil and groundwater data was also conducted to identify potential concerns to upland site workers. The risk screening evaluation was used to identify contaminants of potential concern (COPCs) that deserve further investigation and/or should be carried forward to risk assessment.

The risk screening process included the following steps.

1. tabulate groundwater, stormwater, and soil COI concentrations
2. screen those concentrations against water quality and soil quality criteria from DEQ and EPA guidance documents
3. Identify contaminants of potential concern (COPCs) based on exceedences of screening levels
4. identify the site areas where the screening levels are exceeded, and which could potentially constitute source areas to the river or to site workers
5. determine if sufficient data are available in the area of the exceedances to support the risk assessment
6. identify those areas, if any, where additional site characterization is needed to support the source control evaluation or risk assessment

4.6.1 Groundwater Screen

Potential Human Receptors. Groundwater quality data are screened for protection of upland site workers in Table 5 (TPH), Table 6 (PAHs and SVOCs), and Table 7 (VOCs) using the risk-based concentrations (RBCs) presented in DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (DEQ, 2003). Note that groundwater samples collected from GeoProbe borings were not used in the screening process; only groundwater samples obtained from appropriately constructed and developed monitoring wells. Potential exposure pathways include vapor intrusion to indoor air and volatilization to outdoor air for occupational workers. Because depth to groundwater is below the practical limits of excavation at this Site (see Table 4), direct contact of excavation or construction workers with groundwater is not considered a viable pathway.

The RBCs for volatilization from groundwater to indoor or outdoor air exceed saturation values for gasoline- and diesel-range hydrocarbons (Table 5) as well as PAHs (Table 6). Therefore, TPH and PAHs do not in general pose a risk to occupational workers via this pathway. However, the DEQ RBCs are not applicable to free product conditions; thus the LNAPL area (vicinity of MW-11) may warrant further investigation.

The screening evaluation of volatile organic compounds via indoor and outdoor air is summarized in Table 7. Chlorinated solvent concentrations were above RBCs for vapor intrusion to indoor air in very limited areas of the Site (Table 7). TCE and PCE were consistently at or above indoor air RBCs at location EX-1. TCE was above the vapor intrusion RBC in one monitoring round at location MW-6; however, this exceedance has not been confirmed in two subsequent monitoring rounds. Neither of these two locations is situated below an enclosed building; thus, the pathway does not appear to be complete considering RBCs for volatilization to outdoor air were not exceeded

Potential Ecological Receptors (Aquatic Organisms). Groundwater quality data are screened for protection of aquatic organisms in the Willamette River in Table 13.

This table summarizes groundwater concentrations for shoreline monitoring wells which are situated near the area of discharge to the river (EX-2, EX-3, EX-5, MW-5, MW-7, MW-8, and MW-14). Comparing groundwater concentrations to these criteria is conservative, because it assumes no attenuation or dilution of groundwater concentrations from the monitoring wells to the seepage areas along the river bank, nor any dilution between the river bank and the water column where aquatic organisms are living.

For this screening evaluation, chronic water quality criteria were derived from several sources. Surface water SLVs from DEQ *Level II Ecological Risk Assessment Guidance* (2001) were considered in the evaluation. SLVs which are based on protection of invertebrates (e.g., daphnids) are evaluated at the population level, and SLVs which are based on protection of fish are evaluated at the level of the individual, because fish-based criteria are representative of threatened salmonids in the river [per Task (9)(c)(i), DEQ, 2001]. However, several of the Level II SLVs are based on outdated information. Recently, EPA issued Final Chronic Values for PAHs (EPA, 2003). Also, EPA 2002 National Recommended Water Quality Criteria were considered in the screening evaluation.

There were no shoreline wells with detected COI concentrations which exceeded any of the chronic water quality criteria. Therefore, no COPCs were identified that would potentially impact aquatic life in the river.

4.6.2 Soil Screen

Upland Site Workers. Soil quality data were screened for protection of upland site workers in Table 9 (TPH), Table 10 (PAHs and SVOCs), Table 11 (VOCs), and Table 12 (Metals). Occupational and excavation worker scenarios were screened because these represent existing receptors at the site. In addition, a construction worker scenario was also screened as a possible future exposure scenario, although no site redevelopment work is currently planned. As a result, the construction worker scenario was evaluated as a "worst-case" exposure considering soil concentrations from all depths and locations at the site.

The majority of the screening levels for the soil evaluation were derived from DEQ (2003). This guidance addresses direct contact exposures to occupational, excavation, and construction workers, and volatilization to indoor and outdoor air from contaminated soils. However, this guidance includes primarily hydrocarbon compounds and chlorinated solvents. Screening levels for compounds not listed in DEQ (2003) were derived from industrial Preliminary Remediation Goals (PRGs) developed by EPA Region 9 (EPA, 2002). Although these values are representative of occupational exposures, they were conservatively used to screen exposures to subsurface soils by excavation and construction workers, even though the exposure periods for these workers are typically much shorter duration. Finally, the arsenic screening level in soil was based on the regional background concentration for this metal (7 mg/kg; Ecology, 1994) because the regional background value exceeds the risk-based PRG (1.6 mg/kg; EPA, 2002).

Petroleum constituents (gasoline and diesel) in Site soils did not exceed DEQ RBCs for occupational and excavation workers (Table 9). In a very limited location (GP-31, 14-16′), the construction worker RBC for diesel was exceeded. This same sample exceeded RBCs for three carcinogenic PAH compounds for occupational and/or construction worker scenarios (Table 10). However, because of the excessive depth of this sample (14 to 16 feet below grade), these are not considered significant exposure pathways. One other sample (GP-29, 4-6′) exceeded the occupational RBC for benzo(a)pyrene; however, occupational exposures are generally evaluated over the top 3 feet of soil (DEQ, 2003).

No VOCs in site soils, neither hydrocarbons nor chlorinated solvents, were above Site screening levels for direct contact, indoor or outdoor air (Table 11). Similarly, no metals in site soils were above Region 9 PRGs, or in the case of arsenic, the regional background concentration (Table 12).

In summary, no TPH, PAHs, SVOCs, VOCs, or metals were found above screening levels at depths appropriate to the receptor being evaluated. These results indicate no potential risk to existing occupational or excavation workers, or possible future construction workers.

Hot Spot Evaluation. Free petroleum LNAPL has been detected in well MW-11, preliminarily identified as a residual bunker C or diesel fuel. Further characterization of the LNAPL is needed to determine if the LNAPL is a hot spot, and to evaluate remedial alternatives, if required. In addition, the draft DEQ TPH guidance indicates that the generic RBCs are not applicable in areas of free product. The risk of contact with free product may need to be further evaluated as part of the risk assessment.

4.6.3 Stormwater Screen

Stormwater. On Table 14, stormwater concentrations are compared to ecological screening criteria which are based on five times the acute ambient water quality criteria for aquatic life (EPA, 2002a, 2002b), consistent with DEQ's Portland Harbor source control strategy and NPDES stormwater permitting guidelines. The acute water quality criteria are derived from EPA 2002 *National Recommended Water Quality Criteria* and EPA 2003 *Procedures for Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for Protection of Benthic Organisms: PAH Mixtures.* EPA (2003) presents Final Chronic Values for PAH compounds; these were subsequently converted to Final Acute Values using the acute/chronic ratio of 4.16.

No constituents in stormwater exceeded the aquatic life screening criteria. Therefore, no risk to aquatic life in the Willamette River is indicated.

Catch Basin Sediment. Catch basin sediment samples were compared to DEQ RBCs for excavation workers, representing contractors who may be called in for a short period of time to clean out the storm sewers. Occupational workers are not generally exposed to catch basin sediments, nor are construction workers that may be associated with any future redevelopment of the site. For metals, DEQ RBCs have not been developed; therefore, catch basin sediments were conservatively compared to Industrial PRGs for these constituents.

Petroleum hydrocarbons and PAHs in catch basin sediments were all below their respective RBCs for excavation workers (see Tables 9 and 10). Metals in catch basin sediments were all below their respective PRGs with the exception of arsenic. Arsenic exceeded its PRG as well as the regional background value in two of the four catch basin sediment samples. However, because the PRG for this carcinogen is based on a long-term occupational exposure rather than a short-term utility worker exposure, the potential risk is overestimated. Further evaluation of arsenic in catch basin sediments may be warranted in the risk assessment.

Finally, it is noted that McCall has implemented best management practices (BMPs) to protect stormwater quality, including inlet protection and an oil-water separator for treatment of critical areas of the Site, and routine cleanout of accumulated sediments in catch basins. These BMPs will help to prevent storm sediments from leaving the Site and entering the river. Thus, the indirect soil erosion pathway (i.e., sediment transport via storm sewers) has been controlled at the Site.

4.7 Contaminants of Potential Concern (COPCs)

Based on the risk screening analysis presented above, the following COPCs and their associated exposure pathways are recommended for further evaluation and/or risk assessment:

- LNAPL free product area (occupational, excavation, and trench workers)
- Chlorinated VOCs in groundwater (indoor air, occupational workers)
- Arsenic (catch basin sediments, utility worker)

The following exposure scenarios do not appear to pose any significant risk and can therefore be eliminated from further consideration:

- Direct contact of occupational workers to surface soils
- Direct contact of excavation and trench workers to subsurface soils
- Indoor and outdoor air exposures to occupational workers from volatilization of TPH and PAHs
- Outdoor air exposures to occupational workers from any Site COIs

- Exposures to aquatic life from stormwater runoff to the Willamette River
- Exposures to aquatic life from groundwater discharge to the Willamette River

5 DATA GAP ANALYSIS

5.1 Source Control Findings

The risk screening analysis of RI data in Section 4.6 showed that site groundwater and stormwater COI concentrations do not exceed conservative risk-based criteria. Therefore there are no upland data gaps with respect to river source control assessment. This agrees with the conclusion of the Preliminary Assessment of McCall Oil & Chemical Corporation and Great Western Chemical Company (EMCON Northwest, Inc., April 5, 1994).

5.2 Upland Human Health Risk Assessment

A focused upland human health risk assessment may be needed in the following areas.

- **LNAPL at property line near monitoring well MW-11.** Further assessment and possible cleanup of this LNAPL should be the responsibility of Tube Forgings, since it appears that this material is sourced from a historic Bunker C release at Tube Forgings.
- **Arsenic in Storm Drain Sediment.** Although historic arsenic concentrations in storm drain sediment exceeded the Region 9 industrial PRG, this criteria may not be applicable considering the method and frequency of exposure of storm drain maintenance workers. The storm drains are cleaned remotely using a vactor truck on an annual basis. Therefore there is little, if any, exposure of vactor truck operators to catch basin sediment. This pathway may warrant additional assessment considering the actual exposure of utility workers during these annual maintenance activities.
- **Groundwater Chlorinated VOCs to Indoor Air.** This pathway may need further assessment to determine if it is reasonably likely that future facility buildings will be placed over the VOC plume.

McCall may request that future human health risk assessment, if required by DEQ, be conducted under a separate VCP Agreement.

6 REFERENCES

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Table 1

Groundwater Sampling Rationale

McCall Oil and Chemical Corporation
Focused RI Workplan

Potential Source Area	Sampling Locations	Chemical Class Tested [a]	Rationale
McCall Oil & Chemical Corp.			
Diesel rack (marine terminal)	EX-2, GP-20	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of TPH/PAHs
Asphalt rack (asphalt plant)	GP-8	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of TPH/PAHs
Asphalt plant AST tank farm	GP-8, -9, -21,-28, -29, -30, -37	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of TPH/PAHs
	GP-48, -49, -50	TPH (soil only)	Evaluate extent of TPH detected at GP-9
Railcar loading/unloading facility	GP-6, -7	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs and TPH/PAHs
Marine terminal AST tank farm	GP-15 to GP-20, GP-22, -23, -24, -25, -26, -27, -34, -35, -36, EX-2, EX-3, EX-5, MW-8, -13	VOCs, SVOCs, PAHs, TPH	Document groundwater quality in AST farm and leaving site
Former Great Western Chemical Co.			
Railcar loading/unloading facility	GP-6, -7	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs and TPH/PAHs
Acid/solvent AST tank farm	EX-1, EX-6, GP-8, GP-9	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs
Drumming shed	EX-1, EX-6, GP-9, -10, -38, -39, MW-6, -7	VOCs, SVOCs, PAHs, TPH	Downgradient of potential source of VOCs
	GP-41, -42, -43, -44	VOCs	Evaluate vertical extent of contamination
Former CCA production area	EX-4 (MW-2), MW-1, -3, -4, -5	VOCs, SVOCs, PAHs, TPH	Downgradient of documented source of metals. Source has been removed.
	GP-11, -12, -13, -14, -15	VOCs, SVOCs, PAHs, TPH, Metals	
	GP-51, -52, -53	Metals	
Upgradient Off-Site Source Areas	GP-1, -2, -31, EX-7, MW-9, -10, -11, -12	VOCs, SVOCs, PAHs, TPH	Evaluate groundwater quality entering the site from upgradient sources
	GP-3, -4, -5	VOCs, SVOCs, PAHs, TPH, Metals	
	GP-32, -33, -40	VOCs, SVOCs, PAHs, TPH	
	GP-45, -46, -47	TPH	Evaluate extent of free product
	GP-54 through GP-63	Not Tested	Evaluate extent of free product

NOTE: VOCs = chlorinated VOCs; SVOCs = four semivolatile organic compounds listed in workplan; PAHs = polynuclear aromatic hydrocarbons;
TPH = total petroleum hydrocarbons as diesel and oil; Metals = dissolved arsenic, chromium, and copper.

[a] List of chemicals to be tested for each chemical class is shown in QAPP (Appendix B of RI Workplan).

Table 2
Sampling Matrix
Groundwater and Stormwater
McCall/GWCC
Portland, Oregon

Location	Organic Compounds							Metals	
	VOCs	4-methylphenol	Butyl Benzyl Phthalate	Di-n-octyl Phthalate	Dibenzofuran	PAHs	Total Petroleum Hydrocarbons	As, Cu, Cr	Cd, Pb, Zn
Geoprobe Borings - Groundwater									
GP-1	X	X	X	X	X	X	X		
GP-2	X	X	X	X	X	X	X		
GP-3	X	X	X	X	X	X	X	X	
GP-4	X	X	X	X	X	X	X	X	
GP-5	X	X	X	X	X	X	X	X	
GP-6	X	X	X	X	X	X	X		
GP-7	X	X	X	X	X	X	X		
GP-8	X	X	X	X	X	X	X		
GP-9	X	X	X	X	X	X	X		
GP-10	X	X	X	X	X	X	X		
GP-11	X	X	X	X	X	X	X	X	
GP-12	X	X	X	X	X	X	X	X	
GP-13	X	X	X	X	X	X	X	X	
GP-14	X	X	X	X	X	X	X	X	
GP-15	X	X	X	X	X	X	X	X	
GP-16	X	X	X	X	X	X	X	X	
GP-17	X	X	X	X	X	X	X		
GP-18	X	X	X	X	X	X	X		
GP-19	X	X	X	X	X	X	X		
GP-20	X	X	X	X	X	X	X		
GP-21	X	X	X	X	X	X	X		
GP-22	X	X	X	X	X	X	X		
GP-23	X	X	X	X	X	X	X		
GP-24	X	X	X	X	X	X	X		
GP-25	X	X	X	X	X	X	X		
GP-26	X	X	X	X	X	X	X		
GP-27	X	X	X	X	X	X	X		
GP-28	X	X	X	X	X	X	X		
GP-29	X	X	X	X	X	X	X		
GP-30	X	X	X	X	X	X	X		
GP-31	X	X	X	X	X	X	X		
GP-32	X	X	X	X	X	X	X		
GP-33	X	X	X	X	X	X	X		
GP-34	X	X	X	X	X	X	X		
GP-35	X	X	X	X	X	X	X		
GP-36	X	X	X	X	X	X	X		
GP-37	X	X	X	X	X	X	X		
GP-38	X	X	X	X	X	X	X		
GP-39	X	X	X	X	X	X	X		
GP-40	X	X	X	X	X	X	X		
GP-41-19.5	X								
GP-41-39.5	X								
GP-41-56.0	X								
GP-41-74.0	X								
GP-42-19.0	X								
GP-42-42.5	X								
GP-42-54.5	X								
GP-42-75.5	X								
GP-43-22.5	X								
GP-43-34.5	X								
GP-43-64.0	X								
GP-43-74.5	X								
GP-44-22.0	X								
GP-44-45.5	X								
GP-44-75.5	X								
GP-44-76.5	X								
GP-45							X		
GP-46							X		
GP-47							X		
GP-51								X	
GP-52								X	
GP-53								X	

Table 2
Sampling Matrix
Groundwater and Stormwater
McCall/GWCC
Portland, Oregon

	Organic Compounds							Metals	
Location	VOCs	4-methylphenol	Butyl Benzyl Phthalate	Di-n-octyl Phthalate	Dibenzofuran	PAHs	Total Petroleum Hydrocarbons	As, Cu, Cr	Cd, Pb, Zn
Monitoring Wells - Groundwater									
EX-1	X	X	X	X	X	X	X		
EX-2	X	X	X	X	X	X	X		
EX-3	X	X	X	X	X	X	X		
EX-4/MW-2	X	X	X	X	X	X	X	X	
EX-5	X	X	X	X	X	X	X		
EX-7	X	X	X	X	X	X	X		
MW-1	X	X	X	X	X	X	X	X	
MW-3	X	X	X	X	X	X	X	X	
MW-4	X	X	X	X	X	X	X	X	
MW-5	X	X	X	X	X	X	X		
MW-6	X	X	X	X	X	X	X	X	
MW-7	X	X	X	X	X	X	X	X	
MW-8	X	X	X	X	X	X	X	X	
MW-9	X	X	X	X	X	X	X		
MW-10	X	X	X	X	X	X	X		
MW-11	X	X	X	X	X	X	X		
MW-12	X	X	X	X	X	X	X		
MW-13	X	X	X	X	X	X	X		
MW-14	X	X	X	X	X	X	X	X	
MW-15	X	X	X	X	X	X	X		
Catch Basins - Storm Water									
S-1W		X	X	X	X	X	X	X	X
S-2W		X	X	X	X	X	X	X	X
S-3W		X	X	X	X	X	X	X	X
Oil/Water Separator - Storm Water									
S-4W		X	X	X	X	X	X	X	X

Note: The soil and groundwater samples from GP-54 and GP-55 were not tested.

Table 3
Sampling Matrix
Upland Soil and Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location	Organic Compounds							Metals			
	VOCs	4-methylphenol	Butyl Benzyl Phthalate	Di-n-octyl Phthalate	Dibenzofuran	PAHs	Total Petroleum Hydrocarbons	As, Cu, Cr (dissolved for groundwater)	Cd, Pb, Zn (dissolved for groundwater)	Total Organic Carbon	Grain Size
Geoprobe Borings - Soil											
GP-1 18-20										X	X
GP-4 10-12	X	X	X	X	X	X	X	X			
GP-4 18-20										X	X
GP-6 18-20										X	X
GP-7 2-4	X	X	X	X	X	X	X	X			
GP-8 16-18										X	X
GP-9 10-12	X	X	X	X	X	X	X	X			
GP-11 18-20										X	X
GP-13 22-24										X	X
GP-14 0-2		X	X	X	X	X	X	X			
GP-14 2-4		X	X	X	X	X	X	X			
GP-14 20-22		X	X	X	X	X	X	X			
GP-14 22-24										X	X
GP-15 0-2		X	X	X	X	X	X	X			
GP-15 2-4		X	X	X	X	X	X	X			
GP-15 20-22	X	X	X	X	X	X	X	X			
GP-16 0-2		X	X	X	X	X	X	X			
GP-16 2-4		X	X	X	X	X	X	X			
GP-16 16-18		X	X	X	X	X	X	X			
GP-16 20-22										X	X
GP-17 0-2		X	X	X	X	X	X	X			
GP-17 2-4		X	X	X	X	X	X	X			
GP-17 12-14	X	X	X	X	X	X	X	X			
GP-18 0-2		X	X	X	X	X	X	X			
GP-18 2-4		X	X	X	X	X	X	X			
GP-18 16-18		X	X	X	X	X	X	X			
GP-18 22-24										X	X
GP-19 0-2		X	X	X	X	X	X	X			
GP-19 2-4		X	X	X	X	X	X	X			
GP-19 16-18		X	X	X	X	X	X	X			
GP-19 18-20										X	X
GP-20 2-4		X	X	X	X	X	X	X			
GP-20 16-18		X	X	X	X	X	X	X			
GP-21 16-18										X	X
GP-22 10-12	X	X	X	X	X	X	X				
GP-23 16-18	X	X	X	X	X	X	X				
GP-24 12-14	X	X	X	X	X	X	X				
GP-24 16-18	X	X	X	X	X	X	X				
GP-25 10-12	X	X	X	X	X	X	X				
GP-25 14-16	X	X	X	X	X	X	X				
GP-26 14-16	X	X	X	X	X	X	X				
GP-26 18-20	X	X	X	X	X	X	X				
GP-27 10-12	X	X	X	X	X	X	X				
GP-28 12-14	X	X	X	X	X	X	X				
GP-29 4-6	X	X	X	X	X	X	X				
GP-30 4-6	X	X	X	X	X	X	X				
GP-31 14-16	X	X	X	X	X	X	X				
GP-32 10-12	X	X	X	X	X	X	X				
GP-33 16-18	X	X	X	X	X	X	X				
GP-34 12-14	X	X	X	X	X	X	X				
GP-35 10-12	X	X	X	X	X	X	X				
GP-36 12-14	X	X	X	X	X	X	X				
GP-38 10-12	X	X	X	X	X	X	X				
GP-48 10-12							X				
GP-49 10-12							X				
GP-50 10-12							X				
Catch Basins - Sediment											
S-1		X	X	X	X	X	X	X	X	X	
S-2		X	X	X	X	X	X	X	X	X	
S-3		X	X	X	X	X	X	X	X	X	
S3-01C		X	X	X	X	X	X	X	X	X	

Note: The soil and groundwater samples from GP-54 and GP-55 were not tested.

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
EX-1	36.12	09/08/94	15.35	20.77
EX-1	36.12	12/29/94	14.60	21.52
EX-1	36.12	03/29/95	13.06	23.06
EX-1	36.12	06/27/95	13.65	22.47
EX-1	36.12	07/14/95	13.82	22.30
EX-1	36.12	05/01/97	12.71	23.41
EX-1	36.12	02/03/99	13.21	22.91
EX-1	36.12	12/08/00	15.65	20.47
EX-1	36.12	01/19/01	15.46	20.66
EX-1	36.12	02/08/01	15.55	20.57
EX-1	36.12	03/08/01	15.65	20.47
EX-1	36.12	04/12/01	15.72	20.40
EX-1	36.12	05/15/01	15.68	20.44
EX-1	36.12	06/12/01	15.75	20.37
EX-1	36.12	07/16/01	15.84	20.28
EX-1	36.12	08/14/01	15.97	20.15
EX-1	36.12	09/13/01	16.07	20.05
EX-1	36.12	10/25/01	16.31	19.81
EX-1	36.12	11/16/01	16.27	19.85
EX-1	36.12	12/18/01	15.88	20.24
EX-1	36.12	01/22/02	15.05	21.07
EX-1	36.12	02/14/02	14.56	21.56
EX-1	36.12	03/06/02	14.28	21.84
EX-1	36.12	10/02/02	15.39	20.73
EX-1	36.12	02/11/04	13.74	22.38
EX-2	32.28	09/08/94	18.56	13.72
EX-2	32.28	12/29/94	17.87	14.41
EX-2	32.28	03/29/95	17.11	15.17
EX-2	32.28	06/27/95	17.27	15.01
EX-2	32.28	07/14/95	17.42	14.86
EX-2	32.28	05/01/97	13.08	19.20
EX-2	32.28	02/03/99	16.30	15.98
EX-2	32.28	12/08/00	18.66	13.62
EX-2	32.28	01/19/01	18.67	13.61
EX-2	32.28	02/08/01	18.70	13.58
EX-2	32.28	03/08/01	18.76	13.52
EX-2	32.28	04/12/01	18.10	14.18
EX-2	32.28	05/15/01	17.94	14.34
EX-2	32.28	06/12/01	17.94	14.34
EX-2	32.28	07/16/01	18.49	13.79
EX-2	32.28	08/14/01	18.73	13.55
EX-2	32.28	09/13/01	18.90	13.38
EX-2	32.28	10/25/01	19.18	13.10
EX-2	32.28	11/16/01	19.24	13.04
EX-2	32.28	12/18/01	18.50	13.78
EX-2	32.28	01/22/02	17.83	14.45
EX-2	32.28	02/14/02	17.49	14.79
EX-2	32.28	03/06/02	17.45	14.83
EX-2	32.28	10/02/02	18.22	14.06
EX-2	32.28	02/11/04	17.54	14.74

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
EX-3	32.07	09/08/94	17.96	14.11
EX-3	32.07	12/29/94	16.72	15.35
EX-3	32.07	03/29/95	15.43	16.64
EX-3	32.07	06/27/95	15.91	16.16
EX-3	32.07	07/14/95	15.96	16.11
EX-3	32.07	05/01/97	12.84	19.23
EX-3	32.07	02/03/99	15.12	16.95
EX-3	32.07	12/08/00	18.27	13.80
EX-3	32.07	01/19/01	18.13	13.94
EX-3	32.07	02/08/01	18.10	13.97
EX-3	32.07	03/08/01	18.17	13.90
EX-3	32.07	04/12/01	17.44	14.63
EX-3	32.07	05/15/01	17.08	14.99
EX-3	32.07	06/12/01	17.04	15.03
EX-3	32.07	07/16/01	17.82	14.25
EX-3	32.07	08/14/01	18.25	13.82
EX-3	32.07	09/13/01	18.51	13.56
EX-3	32.07	10/25/01	18.92	13.15
EX-3	32.07	11/16/01	19.02	13.05
EX-3	32.07	12/18/01	17.91	14.16
EX-3	32.07	01/22/02	16.41	15.66
EX-3	32.07	02/14/02	15.95	16.12
EX-3	32.07	03/06/02	15.88	16.19
EX-3	32.07	10/02/02	17.59	14.48
EX-3	32.07	02/11/04	15.99	16.08
EX-4 (MW-2)	35.60	10/18/93	16.63	18.97
EX-4 (MW-2)	35.60	10/28/93	16.72	18.88
EX-4 (MW-2)	35.60	01/27/94	16.56	19.04
EX-4 (MW-2)	35.60	09/08/94	16.86	18.74
EX-4 (MW-2)	35.60	12/29/94	16.09	19.51
EX-4 (MW-2)	35.60	03/29/95	14.63	20.97
EX-4 (MW-2)	35.60	06/27/95	15.22	20.38
EX-4 (MW-2)	35.60	07/14/95	15.41	20.19
EX-4 (MW-2)	35.60	05/01/97	14.08	21.52
EX-4 (MW-2)	35.60	02/03/99	14.58	21.02
EX-4 (MW-2)	35.60	12/08/00	16.97	18.63
EX-4 (MW-2)	35.60	01/19/01	16.81	18.79
EX-4 (MW-2)	35.60	02/08/01	16.84	18.76
EX-4 (MW-2)	35.60	03/08/01	16.92	18.68
EX-4 (MW-2)	35.60	04/12/01	16.96	18.64
EX-4 (MW-2)	35.60	05/15/01	16.92	18.68
EX-4 (MW-2)	35.60	06/12/01	16.98	18.62
EX-4 (MW-2)	35.60	07/16/01	17.09	18.51
EX-4 (MW-2)	35.60	08/14/01	17.22	18.38
EX-4 (MW-2)	35.60	09/13/01	17.30	18.30
EX-4 (MW-2)	35.60	10/25/01	17.51	18.09
EX-4 (MW-2)	35.60	11/16/01	17.52	18.08
EX-4 (MW-2)	35.60	12/18/01	17.22	18.38
EX-4 (MW-2)	35.60	01/22/02	16.28	19.32
EX-4 (MW-2)	35.60	02/14/02	15.80	19.80
EX-4 (MW-2)	35.60	03/06/02	15.61	19.99
EX-4 (MW-2)	35.60	10/02/02	16.49	19.11
EX-4 (MW-2)	35.60	02/11/04	15.14	20.46

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
EX-5	31.87	09/08/94	NM	
EX-5	31.87	12/29/94	15.85	16.02
EX-5	31.87	03/29/95	14.84	17.03
EX-5	31.87	06/27/95	16.32	15.55
EX-5	31.87	07/14/95	16.34	15.53
EX-5	31.87	05/01/97	12.06	19.81
EX-5	31.87	02/03/99	13.45	18.42
EX-5	31.87	12/08/00	19.72	12.15
EX-5	31.87	01/19/01	18.87	13.00
EX-5	31.87	02/08/01	18.98	12.89
EX-5	31.87	03/08/01	19.22	12.65
EX-5	31.87	04/12/01	18.96	12.91
EX-5	31.87	05/15/01	18.94	12.93
EX-5	31.87	06/12/01	19.05	12.82
EX-5	31.87	07/16/01	19.76	12.11
EX-5	31.87	08/14/01	20.32	11.55
EX-5	31.87	09/13/01	20.70	11.17
EX-5	31.87	10/25/01	21.27	10.60
EX-5	31.87	11/16/01	21.04	10.83
EX-5	31.87	12/18/01	16.64	15.23
EX-5	31.87	01/22/02	16.10	15.77
EX-5	31.87	02/14/02	15.35	16.52
EX-5	31.87	03/06/02	15.93	15.94
EX-5	31.87	10/02/02	19.58	12.29
EX-5	31.87	02/11/04	15.70	16.17
EX-6	34.38	09/08/94	NM	
EX-6	34.38	12/29/94	13.98	20.40
EX-6	34.38	03/29/95	12.51	21.87
EX-6	34.38	06/27/95	13.04	21.34
EX-6	34.38	07/14/95	13.17	21.21
EX-6	34.38	05/01/97	11.93	22.45
EX-6	34.38	02/03/99	12.71	21.67
EX-6	34.38	12/08/00	Well casing filled with silt	
EX-6	34.38	11/16/01	Decommissioned	
EX-7	35.29	09/08/94	NM	
EX-7	35.29	12/29/94	13.21	22.08
EX-7	35.29	03/29/95	11.69	23.60
EX-7	35.29	06/27/95	12.34	22.95
EX-7	35.29	07/14/95	12.38	22.91
EX-7	35.29	05/01/97	11.44	23.85
EX-7	35.29	02/03/99	11.81	23.48
EX-7	35.29	12/08/00	14.32	20.97
EX-7	35.29	01/19/01	14.15	21.14
EX-7	35.29	02/08/01	14.18	21.11
EX-7	35.29	03/08/01	14.30	20.99
EX-7	35.29	04/12/01	14.37	20.92
EX-7	35.29	05/15/01	14.33	20.96
EX-7	35.29	06/12/01	14.41	20.88
EX-7	35.29	07/16/01	14.51	20.78
EX-7	35.29	08/14/01	14.65	20.64
EX-7	35.29	09/13/01	14.75	20.54
EX-7	35.29	10/25/01	15.01	20.28
EX-7	35.29	11/16/01	14.98	20.31
EX-7	35.29	12/18/01	14.42	20.87
EX-7	35.29	01/22/02	13.50	21.79
EX-7	35.29	02/14/02	13.15	22.14
EX-7	35.29	03/06/02	12.86	22.43
EX-7	35.29	10/02/02	13.76	21.53
EX-7	35.29	02/11/04	12.31	22.98

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
MW-1	35.48	05/11/93	15.56	19.92
MW-1	35.48	10/18/93	17.04	18.44
MW-1	35.48	10/28/93	17.16	18.32
MW-1	35.48	01/27/94	16.99	18.49
MW-1	35.48	09/08/94	NM	
MW-1	35.48	12/29/94	16.43	19.05
MW-1	35.48	03/29/95	NM	
MW-1	35.48	06/27/95	NM	
MW-1	35.48	07/14/95	NM	
MW-1	35.48	05/01/97	14.12	21.36
MW-1	35.48	02/03/99	14.83	20.65
MW-1	35.48	12/08/00	17.40	18.08
MW-1	35.48	01/19/01	17.23	18.25
MW-1	35.48	02/08/01	17.32	18.16
MW-1	35.48	03/08/01	17.42	18.06
MW-1	35.48	04/12/01	17.41	18.07
MW-1	35.48	05/15/01	17.37	18.11
MW-1	35.48	06/12/01	NM	
MW-1	35.48	07/16/01	17.59	17.89
MW-1	35.48	08/14/01	17.70	17.78
MW-1	35.48	09/13/01	17.78	17.70
MW-1	35.48	10/25/01	17.97	17.51
MW-1	35.48	11/16/01	17.88	17.60
MW-1	35.48	12/18/01	17.44	18.04
MW-1	35.48	01/22/02	16.68	18.80
MW-1	35.48	02/14/02	16.38	19.10
MW-1	35.48	03/06/02	16.03	19.45
MW-1	35.48	10/02/02	16.98	18.50
MW-1	35.48	02/11/04	15.63	19.85
MW-3	34.56	10/18/93	16.47	18.09
MW-3	34.56	10/28/93	16.60	17.96
MW-3	34.56	01/27/94	16.40	18.16
MW-3	34.56	09/08/94	NM	
MW-3	34.56	12/29/94	15.90	18.66
MW-3	34.56	03/29/95	NM	
MW-3	34.56	06/27/95	NM	
MW-3	34.56	07/14/95	NM	
MW-3	34.56	05/01/97	13.73	20.83
MW-3	34.56	02/03/99	14.36	20.20
MW-3	34.56	12/08/00	16.73	17.83
MW-3	34.56	01/19/01	16.60	17.96
MW-3	34.56	02/08/01	16.64	17.92
MW-3	34.56	03/08/01	16.73	17.83
MW-3	34.56	04/12/01	16.73	17.83
MW-3	34.56	05/15/01	16.71	17.85
MW-3	34.56	06/12/01	16.76	17.80
MW-3	34.56	07/16/01	16.91	17.65
MW-3	34.56	08/14/01	16.97	17.59
MW-3	34.56	09/13/01	17.09	17.47
MW-3	34.56	10/25/01	17.24	17.32
MW-3	34.56	11/16/01	17.16	17.40
MW-3	34.56	12/18/01	16.82	17.74
MW-3	34.56	01/22/02	16.09	18.47
MW-3	34.56	02/14/02	15.65	18.91
MW-3	34.56	03/06/02	15.50	19.06
MW-3	34.56	10/02/02	16.36	18.20
MW-3	34.56	02/11/04	15.12	19.44

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
MW-4	33.61	10/18/93	16.21	17.40
MW-4	33.61	10/28/93	16.26	17.35
MW-4	33.61	01/27/94	16.06	17.55
MW-4	33.61	09/08/94	NM	
MW-4	33.61	12/29/94	15.55	18.06
MW-4	33.61	03/29/95	NM	
MW-4	33.61	06/27/95	NM	
MW-4	33.61	07/14/95	NM	
MW-4	33.61	05/01/97	13.32	20.29
MW-4	33.61	02/03/99	14.04	19.57
MW-4	33.61	12/08/00	16.25	17.36
MW-4	33.61	01/19/01	16.17	17.44
MW-4	33.61	02/08/01	16.21	17.40
MW-4	33.61	03/08/01	16.29	17.32
MW-4	33.61	04/12/01	16.28	17.33
MW-4	33.61	05/15/01	16.28	17.33
MW-4	33.61	06/12/01	16.32	17.29
MW-4	33.61	07/16/01	16.43	17.18
MW-4	33.61	08/14/01	16.53	17.08
MW-4	33.61	09/13/01	16.60	17.01
MW-4	33.61	10/25/01	16.74	16.87
MW-4	33.61	11/16/01	16.63	16.98
MW-4	33.61	12/18/01	16.20	17.41
MW-4	33.61	01/22/02	15.65	17.96
MW-4	33.61	02/14/02	15.26	18.35
MW-4	33.61	03/06/02	15.18	18.43
MW-4	33.61	10/02/02	15.96	17.65
MW-4	33.61	02/11/04	14.76	18.85
MW-5	34.66	10/18/93	20.13	14.53
MW-5	34.66	10/28/93	20.48	14.18
MW-5	34.66	01/27/94	19.89	14.77
MW-5	34.66	09/08/94	NM	
MW-5	34.66	12/29/94	19.25	15.41
MW-5	34.66	03/29/95	NM	
MW-5	34.66	06/27/95	NM	
MW-5	34.66	07/14/95	NM	
MW-5	34.66	05/01/97	15.91	18.75
MW-5	34.66	02/03/99	18.15	16.51
MW-5	34.66	12/08/00	19.80	14.86
MW-5	34.66	01/19/01	19.69	14.97
MW-5	34.66	02/08/01	19.67	14.99
MW-5	34.66	03/08/01	19.75	14.91
MW-5	34.66	04/12/01	19.80	14.86
MW-5	34.66	05/15/01	20.00	14.66
MW-5	34.66	06/12/01	20.01	14.65
MW-5	34.66	07/16/01	20.32	14.34
MW-5	34.66	08/14/01	20.39	14.27
MW-5	34.66	09/13/01	20.47	14.19
MW-5	34.66	10/25/01	20.30	14.36
MW-5	34.66	11/16/01	20.19	14.47
MW-5	34.66	12/18/01	19.18	15.48
MW-5	34.66	01/22/02	19.00	15.66
MW-5	34.66	02/14/02	18.79	15.87
MW-5	34.66	03/06/02	18.95	15.71
MW-5	34.66	10/02/02	20.25	14.41
MW-5	34.66	02/11/04	18.96	15.70

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
MW-6	34.83	10/25/01	16.73	18.10
MW-6	34.83	11/16/01	16.67	18.16
MW-6	34.83	12/18/01	16.35	18.48
MW-6	34.83	01/22/02	15.46	19.37
MW-6	34.83	02/14/02	15.94	18.89
MW-6	34.83	03/06/02	14.73	20.10
MW-6	34.83	10/02/02	15.57	19.26
MW-6	34.83	02/11/04	14.17	20.66
MW-7	34.74	10/25/01	25.77	8.97
MW-7	34.74	11/16/01	24.94	9.80
MW-7	34.74	12/18/01	21.26	13.48
MW-7	34.74	01/22/02	22.72	12.02
MW-7	34.74	02/14/02	22.61	12.13
MW-7	34.74	03/06/02	23.33	11.41
MW-7	34.74	10/02/02	25.08	9.66
MW-7	34.74	02/11/04	22.66	12.08
MW-8	32.24	10/25/01	25.64	6.60
MW-8	32.24	11/16/01	23.85	8.39
MW-8	32.24	12/18/01	19.55	12.69
MW-8	32.24	01/22/02	22.44	9.80
MW-8	32.24	02/14/02	22.54	9.70
MW-8	32.24	03/06/02	23.52	8.72
MW-8	32.24	10/02/02	25.41	6.83
MW-8	32.24	02/11/04	21.64	10.60
MW-9	36.00	01/22/02	17.57	18.43
MW-9	36.00	02/14/02	17.21	18.79
MW-9	36.00	03/06/02	17.02	18.98
MW-9	36.00	10/02/02	17.85	18.15
MW-9	36.00	02/11/04	16.63	19.37
MW-10	35.06	01/22/02	14.97	20.09
MW-10	35.06	02/14/02	14.46	20.60
MW-10	35.06	03/06/02	14.20	20.86
MW-10	35.06	10/02/02	15.81	19.25
MW-10	35.06	02/11/04	13.64	21.42
MW-11	34.41	01/22/02	13.32	21.09
MW-11	34.41	02/14/02	12.94	21.47
MW-11	34.41	03/06/02	12.76	21.65
MW-11	34.41	10/02/02	Free product, unable to measure	
MW-11	34.41	02/11/04	Free product, unable to measure	
MW-12	32.79	01/22/02	17.88	14.91
MW-12	32.79	02/14/02	17.46	15.33
MW-12	32.79	03/06/02	17.37	15.42
MW-12	32.79	10/02/02	17.65	15.14
MW-12	32.79	02/11/04	17.22	15.57
MW-13	34.94	01/22/02	18.83	16.11
MW-13	34.94	02/14/02	17.95	16.99
MW-13	34.94	03/06/02	17.57	17.37
MW-13	34.94	10/02/02	18.80	16.14
MW-13	34.94	02/11/04	18.17	16.77
MW-14	40.17	02/11/04	22.57	17.60
MW-15	33.56	02/11/04	11.23	22.33

Table 4

Monitoring Well and River Hydrology Measurements
McCall Oil and Chemical

Well	Reference Point Elevation (Feet MSL)	Date	DTW (Feet)	WLE (Feet MSL)
WG-1	37.28	10/28/93	32.82	4.46
WG-1	37.28	01/27/94	30.04	7.24
WG-1	37.28	09/08/94	NM	
WG-1	37.28	12/29/94	NM	
WG-1	37.28	03/29/95	NM	
WG-1	37.28	06/27/95	NM	
WG-1	37.28	07/14/95	NM	
WG-1	37.28	05/01/97	17.80	19.48
WG-1	37.28	02/03/99	23.02	14.26
WG-1	37.28	12/08/00	31.60	5.68
WG-1	37.28	01/19/01	31.74	5.54
WG-1	37.28	02/08/01	30.78	6.50
WG-1	37.28	03/08/01	31.80	5.48
WG-1	37.28	04/12/01	29.15	8.13
WG-1	37.28	05/15/01	29.95	7.33
WG-1	37.28	06/12/01	31.02	6.26
WG-1	37.28	07/16/01	34.23	3.05
WG-1	37.28	08/14/01	33.27	4.01
WG-1	37.28	09/13/01	31.15	6.13
WG-1	37.28	10/25/01	31.38	5.90
WG-1	37.28	11/16/01	30.77	6.51
WG-1	37.28	12/18/01	25.45	11.83
WG-1	37.28	01/22/02	27.80	9.48
WG-1	37.28	02/14/02	29.27	8.01
WG-1	37.28	03/06/02	29.46	7.82
WG-1	37.28	10/02/02	32.60	4.68
WG-1	37.28	02/11/04	28.65	8.63

Note: Reference point elevations for EX-1 to EX-7, MW-1 to MW-5 and WG-1 surveyed by W&H Pacific on 9/19/00. MW-6 to MW-13 surveyed by W&H Pacific on 1/30/02. MW-14 and MW-15 surveyed by W&H Pacific on 4/5/04.

Table 5
TPH in Groundwater and Storm Water
McCall/GWCC

Risk-Based Concentrations (DEQ, 2003)*		TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Construction/ Excavation Worker		12,000		> Saturation		N/A	
Volatilization, Outdoor Air		> Saturation		> Saturation		N/A	
Vapor Intrusion, Indoor Air		> Saturation		> Saturation		N/A	
Location	**Date**	**Analytical Result in µg/L**					
GP-1	12/11/00	100	U	100	U	250	U
GP-2	12/11/00	**130**	H	100	U	250	U
GP-3	12/11/00	**170**	H	**280**	L	250	U
GP-4	12/11/00	**2,500**	H	**7,100**	F	250	U
GP-5	12/11/00	**620**	H	**430**	Y	250	U
GP-6	12/14/00	100	U	100	U	250	U
GP-7	12/14/00	100	U	100	U	250	U
GP-8	12/12/00	100	U	**100**	Y	250	U
GP-9	12/12/00	100	U	**130**	Y	250	U
GP-10	12/12/00	100	U	**100**	Y	250	U
GP-11	12/12/00	100	U	**130**	Y	250	U
GP-12	12/13/00	100	U	**130**	H	250	U
GP-12 Duplicate	12/13/00	100	U	**160**	Y	250	U
GP-13	12/12/00	**110**	Z	**260**	Y	250	U
GP-14	12/13/00	100	U	100	U	250	U
GP-15	12/13/00	100	U	**2,800**	F	250	U
GP-16	12/13/00	100	U	100	U	250	U
GP-17	12/13/00	100	U	100	U	250	U
GP-18	12/14/00	100	U	100	U	250	U
GP-19	12/14/00	100	U	100	U	250	U
GP-19 Duplicate	12/14/00	100	U	100	U	250	U
GP-20	12/14/00	100	U	**550**	Y	250	U
GP-21	12/12/00	100	U	**120**	Y	250	U
GP-22	02/09/01	**210**	H	**1,100**	F	250	U
GP-23	02/09/01	100	U	**440**	H	250	U
GP-24	02/09/01	100	U	**270**	H	250	U
GP-25	02/09/01	100	U	**280**	H	250	U
GP-26	02/09/01	100	U	**300**	H	250	U
GP-27	02/12/01	100	U	**170**	H	250	U
GP-28	02/12/01	100	U	100	U	250	U
GP-29	02/12/01	100	U	100	U	250	U
GP-30	02/12/01	100	U	100	U	250	U
GP-30 Duplicate	02/12/01	100	U	**120**	H	250	U
GP-31	02/13/01	**1,800**	H	**7,600**	Y	250	U
GP-32	02/13/01	100	U	**700**	H	250	U
GP-33	02/13/01	100	U	**320**	Y	250	U
GP-34	02/13/01	**130**	H	**2,100**	Y	250	U
GP-35	02/13/01	100	U	**200**	H	250	U
GP-36	02/13/01	100	U	**210**	Y	250	U
GP-37	02/14/01	100	U	100	U	250	U
GP-38	02/14/01	100	U	100	U	250	U
GP-38 Duplicate	02/14/01	100	U	100	U	250	U
GP-39	02/14/01	100	U	100	U	250	U
GP-40	02/14/01	100	U	**640**	Y	250	U
GP-45	11/14/01	**667**	DET	1,680	U	1,680	U
GP-46	11/14/01	**714**	DET	**38,700**		**28,000**	
GP-47	11/14/01	**250**	DET	630	U	630	U

Table 5
TPH in Groundwater and Storm Water
McCall/GWCC

Risk-Based Concentrations (DEQ, 2003)*		TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Construction/ Excavation Worker		12,000		> Saturation		N/A	
Volatilization, Outdoor Air		> Saturation		> Saturation		N/A	
Vapor Intrusion, Indoor Air		> Saturation		> Saturation		N/A	
Location	**Date**	**Analytical Result in µg/L**					
Monitoring Wells - Water µg/L (ppb)							
EX-1	09/08/94	50	U	50	U	**266**	
EX-1 Duplicate	09/08/94	5	U				
EX-1	12/30/94	50	U	50	U	**632**	
EX-1	03/29/95	50	U	50	U	**454**	
EX-1	07/14/95	50	U	50	U	200	U
EX-1	05/02/97	**167**	Y	50	U	200	U
EX-1 Duplicate	05/02/97	**188**	Y	50	U	200	U
EX-1	02/04/99	100	U	100	U	**924**	
EX-1 Duplicate	02/04/99	100	U	100	U	**814**	
EX-1	12/20/00	**990**	Z	100	U	250	U
EX-1	03/07/02	**460**	H	**280**	Y	**550**	O
EX-1	10/03/02	100	U	100	U	250	U
EX-1	02/11/04	**500**	Z	**120**	Y	250	U
EX-1 Duplicate	02/11/04	**450**	Z	**120**	Y	250	U
EX-2	09/08/94	50	U	50	U	**200**	
EX-2	12/30/94	50	U	50	U	**441**	
EX-2	03/29/95	50	U	50	U	**398**	
EX-2	07/14/95	50	U	50	U	**885**	
EX-2	05/01/97	50	U	**519**	Y	200	U
EX-2	02/04/99	10	U	10	U	**569**	
EX-2	12/20/00	100	U	100	U	250	U
EX-2	03/07/02	110	U	**170**	Y	270	U
EX-2	10/04/02	100	U	**270**	Y	**290**	O
EX-2	02/12/04	100	U	**110**	Y	250	U
EX-3	09/08/94	50	U	50	U	200	
EX-3 Duplicate	09/08/94	50	U	50	U	200	
EX-3	12/30/94	50	U	50	U	**474**	
EX-3	03/29/95	50	U	50	U	**226**	
EX-3	07/14/95	50	U	50	U	200	U
EX-3	05/01/97	50	U	**64**	Y	200	U
EX-3	02/04/99	100	U	100	U	**564**	
EX-3	12/20/00	**690**	Z	100	U	250	U
EX-3	03/07/02	110	U	**110**	Y	270	U
EX-3	10/04/02	100	U	**120**	Y	250	U
EX-3	02/12/04	100	U	100	U	250	U
EX-4/MW-2	09/08/94	50	U	50	U	200	
EX-4/MW-2	12/30/94	50	U	1000	U	**3840**	
EX-4/MW-2	03/29/95	50	U	**2140**		200	U
EX-4/MW-2	07/14/95	50	U	**343**		200	U
EX-4/MW-2 Duplicate	07/14/95	50	U	50	U	200	U
EX-4/MW-2	05/01/97	50	U	**1310**	Y	200	U
EX-4/MW-2	02/03/99	100	U	**787**	Y	250	U
EX-4/MW-2	12/20/00	**640**	Z	100	U	250	U
EX-4/MW-2	03/07/02	**160**	H	**920**	Y	**290**	O
EX-4/MW-2	10/03/02	**150**	H	**980**	Y	250	U
EX-4/MW-2	02/13/04	**120**	H	**920**	Y	**280**	O

Table 5
TPH in Groundwater and Storm Water
McCall/GWCC

Risk-Based Concentrations (DEQ, 2003)*		TPH - FIQ Gasoline		TPH - FIQ Diesel		TPH - FIQ Heavy Fuel Oil	
Construction/ Excavation Worker		12,000		> Saturation		N/A	
Volatilization, Outdoor Air		> Saturation		> Saturation		N/A	
Vapor Intrusion, Indoor Air		> Saturation		> Saturation		N/A	
Location	**Date**	**Analytical Result in µg/L**					
EX-5	12/30/94	50	U	50	U	**1400**	
EX-5	03/29/95	50	U	50	U	**639**	
EX-5 Duplicate	03/29/95	50	U	50	U	**767**	
EX-5	07/14/95	50	U	**1500**		200	U
EX-5	05/01/97	50	U	50	U	200	U
EX-5 Duplicate	05/01/97	50	U	50	U	200	U
EX-5	02/04/99	100	U	**573**	Y	250	U
EX-5 Duplicate	02/04/99	100	U	**550**	Y	250	U
EX-5	12/20/00	**950**	Z	100	U	250	U
EX-5	03/07/02	100	U	**140**	Y	250	U
EX-5	10/04/02	100	U	**120**	Y	**270**	O
EX-6	12/30/94	50	U	50	U	**842**	
EX-6 Duplicate	12/30/94	50	U	50	U	**851**	
EX-6	03/29/95	50	U	50	U	**1160**	
EX-6	07/14/95	50	U	50	U	200	U
EX-6	05/02/97	50	U	50	U	**1450**	
EX-6	02/04/99	100	U	**1280**	Y	250	U
EX-7	12/30/94	50	U	50	U	200	U
EX-7	03/29/95	50	U	50	U	200	U
EX-7	07/14/95	50	U	50	U	200	U
EX-7	05/02/97	50	U	50	U	200	U
EX-7	02/03/99	100	U	250	U	250	U
EX-7	12/20/00	**530**	Z	100	U	250	U
EX-7	03/06/02	100	U	100	U	250	U
EX-7	10/03/02	100	U	100	U	250	U
EX-7	02/13/04	100	U	100	U	250	U
MW-1	05/01/97	50	U	**319**	Y	200	U
MW-1	02/03/99	100	U	250	U	250	U
MW-1	12/20/00	**1,200**	Z	100	U	250	U
MW-1	03/07/02	100	U	**110**	Y	250	U
MW-1	10/03/02	100	U	**220**	Y	250	U
MW-1	02/11/04	100	U	**120**	Y	250	U
MW-3	05/01/97	50	U	**1430**	Y	200	U
MW-3	02/03/99	100	U	**1190**	Y	250	U
MW-3	12/20/00	**720**	Z	100	U	250	U
MW-3 Duplicate	03/07/02	**240**	H	**1000**	Y	**390**	O
MW-3	03/07/02	**220**	H	**1000**	Y	**410**	O
MW-3	10/03/02	**320**	H	**3000**	Y	**520**	L
MW-3	02/11/04	**300**	H	**2000**	Y	250	U
MW-4	05/01/97	50	U	**312**	Y	200	U
MW-4	02/03/99	100	U	**716**	Y	250	U
MW-4	12/20/00	100	U	100	U	250	U
MW-4	03/07/02	**180**	H	**870**	Y	**350**	O
MW-4	10/03/02	**170**	H	**1200**	Y	250	U

Table 5
TPH in Groundwater and Storm Water
McCall/GWCC

Risk-Based Concentrations (DEQ, 2003)*		TPH - FIQ Gasoline		TPH - FIQ Diesel		TPH - FIQ Heavy Fuel Oil	
Construction/ Excavation Worker		12,000		> Saturation		N/A	
Volatilization, Outdoor Air		> Saturation		> Saturation		N/A	
Vapor Intrusion, Indoor Air		> Saturation		> Saturation		N/A	
Location	**Date**	**Analytical Result in µg/L**					
MW-5	05/01/97	50	U	**204**	Y	200	U
MW-5	02/03/99	100	U	**391**	Y	250	U
MW-5	12/20/00	100	U	100	U	250	U
MW-5	03/07/02	100	U	**310**	Y	**260**	O
MW-5	10/03/02	100	U	**280**	Y	250	U
MW-5 Duplicate	10/03/02	100	U	**310**	Y	250	U
MW-5	02/11/04	100	U	**290**	Y	250	U
MW-6	10/25/01	250	U	630	U	630	U
MW-6 Duplicate	10/25/01	250	U	630	U	630	U
MW-6	03/08/02	**160**	Z	**240**	Y	**500**	O
MW-6	10/03/02	100	U	**280**	Y	**350**	L
MW-6 Duplicate	10/03/02	100	U	**230**	Y	**270**	L
MW-6	02/12/04	100	U	**130**	Y	250	U
MW-7	10/25/01	250	U	630	U	630	U
MW-7	03/08/02	110	U	**1500**	Y	**4000**	O
MW-7	10/04/02	**160**	H	**1100**	Y	**820**	O
MW-7	02/12/04	100	U	**240**	Y	250	U
MW-7 Duplicate	02/12/04	100	U	**240**	Y	250	U
MW-8	10/25/01	250	U	**3090**		**1840**	
MW-8	03/07/02	**650**	H	**20000**	Y	**9200**	O
MW-8	10/04/02	**1,100**	H	**35000**	DY	**23000**	DO
MW-8	02/12/04	100	U	**330**	Y	250	U
MW-9	01/22/02	**140**	H	**480**	Y	**310**	O
MW-9	03/06/02	**200**	H	**520**	Y	300	U
MW-9 Duplicate	03/06/02	**210**	H	**600**	Y	290	U
MW-9	10/03/02	**150**	H	**850**	Y	250	U
MW-9	02/13/04	100	U	**300**	Y	250	U
MW-10	01/22/02	100	U	**250**	Y	**510**	O
MW-10	03/06/02	110	U	**170**	Y	**320**	O
MW-10	10/03/02	100	U	**170**	Y	250	U
MW-10	02/13/04	100	U	**370**	Y	250	U
MW-11	01/22/02	**1,900**	H	**15000**	Y	**4300**	O
MW-11	03/08/02	**1,700**	H	**11000**	Y	**2600**	O
MW-12	01/22/02	**110**	H	**630**	Y	**1000**	O
MW-12	03/06/02	**150**	H	**1100**	Y	**1900**	O
MW-12	10/04/02	100	U	**570**	Y	**660**	O
MW-12	02/13/04	100	U	**340**	Y	250	U
MW-13	01/22/02	**300**	H	**1000**	Y	**2300**	O
MW-13 Duplicate	01/22/02	**360**	H	**1300**	Y	**2900**	O
MW-13	03/06/02	**150**	H	**710**	Y	**1500**	O
MW-13	10/04/02	**150**	Z	**650**	Y	**1300**	O
MW-14	02/12/04	100	U	**300**	Y	250	U
MW-15	02/12/04	100	U	100	U	250	U

Table 5
TPH in Groundwater and Storm Water
McCall/GWCC

Risk-Based Concentrations (DEQ, 2003)*		TPH - FIQ Gasoline		TPH - FIQ Diesel		TPH - FIQ Heavy Fuel Oil	
Construction/ Excavation Worker		12,000		> Saturation		N/A	
Volatilization, Outdoor Air		> Saturation		> Saturation		N/A	
Vapor Intrusion, Indoor Air		> Saturation		> Saturation		N/A	
Location	**Date**	**Analytical Result in µg/L**					
Catch Basins - Storm Water							
S-1W	12/20/00	**1,100**	Z	100	U	250	U
S-1W	03/06/02	110	U	110	U	270	U
S-2W	12/20/00	100	U	100	U	250	U
S-2W	03/06/02	**130**	Z	110	U	260	U
S-3W	02/15/01	**1,300**	Z	**510**	Z	250	U
S-3W	03/06/02	110	U	**110**	Z	260	U
Oil/Water Separator - Storm Water							
S-4W	02/15/01	**270**	Z	**280**	Z	250	U
S-4W Duplicate	02/15/01	**260**	Z	**300**	Z	250	U
S-4W	04/09/02	**220**	H	**1,300**	F	**550**	O

Notes:
* Groundwater screened using monitoring well data only; GeoProbe data used only to focus well installations
Bold values indicate detected at or above method reporting limit.
U = Not detected at or above method reporting limit shown.
F = Fingerprint of the sample matches elution pattern of calibration standard
L = Elution pattern indicates the presence of lighter weight constituents.
H = Elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = Fingerprint resembles a petroleum product, but elution pattern does not match the calibration standard.
Z = Fingerprint does not resemble a petroleum product.
DET= Detected above method reporting limit (method reporting limit shown)
D = The reported result is from a dilution.

TABLE 6
PAHs and SVOCs (μg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	DEQ Screening Levels			Groundwater																											
	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	Construction/ Excavation Worker	EX-1 Water 12/20/00		EX-1 Water 03/07/02		EX-1 Water 10/03/02		EX-2 Water 12/20/00		EX-2 Water 03/07/02		EX-2 Water 10/04/02		EX-2 Water 02/12/04		EX-3 Water 12/20/00		EX-3 Water 03/07/02		EX-3 Water 10/04/02		EX-3 Water 02/12/04		EX-4/MW-2 Water 12/20/00		EX-4/MW-2 Water 03/07/02		EX-4/MW-2 Water 10/03/02	
Low Molecular Weight PAHs				LPAHs																											
Naphthalene	> Sat	> Sat	680	0.008	U	0.013	U	**0.028**	U	**0.01**	J	0.013	U	**0.022**	J	**0.023**	J	**0.02**	J	0.013	U	**0.038**	J	0.012	U	0.008	U	0.014	U	0.012	U
Acenaphthylene	n/a	n/a	n/a	0.006	U	0.011	U	0.011	U	0.006	U	0.011	U	0.011	U	0.011	U	0.006	U	0.011	U	0.011	U	0.011	U	0.006	U	0.012	U	0.011	U
Acenaphthene	> Sat	> Sat	> Sat	0.007	U	0.0094	U	0.0088	U	**0.02**	J	**0.041**	J	**0.110**	J	**0.025**	J	**0.01**	J	0.0093	U	**0.023**	J	0.0088	U	**0.14**		**0.30**		**0.19**	J
Fluorene	> Sat	> Sat	> Sat	0.006	U	0.013	U	0.012	U	0.006	U	0.013	U	0.012	U	0.012	U	0.006	U	0.013	U	0.012	U	0.012	U	0.006	U	0.014	U	0.012	U
Phenanthrene	n/a	n/a	n/a	**0.01**	J	**0.038**	J	**0.028**	J	**0.04**	J	**0.047**	J	**0.057**	J	**0.039**	J	**0.04**	J	**0.06**	J	**0.06**	J	**0.028**	J	**0.10**		**0.52**		**0.16**	J
Anthracene	> Sat	> Sat	> Sat	**0.008**	J	**0.063**	J	**0.110**	J	0.006	U	0.016	U	0.015	U	0.015	U	0.006	U	**0.019**	J	**0.016**	J	0.015	U	0.006	U	**0.071**	J	**0.060**	J
2-Methylnaphthalene	n/a	n/a	n/a	0.008	U	0.013	U	0.012	U	**0.008**	J	**0.012**	J	**0.017**	J	**0.013**	J	0.008	U	0.012	U	**0.015**	J	0.012	U	0.008	U	0.013	U	0.012	U
Total LPAH				**0.018**		**0.101**		**0.166**		**0.078**		**0.100**		**0.206**		**0.100**		**0.07**		**0.08**		**0.15**		**0.028**		**0.24**		**0.89**		**0.41**	
High Molecular Weight PAHs				HPAHs																											
Fluoranthene	> Sat	> Sat	> Sat	**0.02**	J	0.014	U	**0.053**	J	**0.009**	J	**0.017**	J	0.013	U	0.013	U	**0.01**	J	**0.038**	J	**0.034**	J	0.013	U	**0.01**	J	**0.048**	J	**0.028**	J
Pyrene	> Sat	> Sat	> Sat	**0.03**	J	**0.039**	J	**0.068**	J	**0.03**	J	**0.039**	J	**0.074**	J	**0.036**	J	**0.03**	J	**0.064**	J	**0.061**	J	**0.028**	J	**0.02**	J	**0.13**	J	**0.049**	J
Benz(a)anthracene	> Sat	> Sat	9.1	**0.01**	J	0.013	U	**0.024**	J	**0.007**	J	0.013	U	0.012	U	0.012	U	**0.008**	J	0.013	U	0.012	U	0.012	U	**0.007**	J	0.013	U	0.012	U
Chrysene	> Sat	> Sat	> Sat	**0.02**	J	0.015	U	**0.033**	J	**0.007**	J	0.015	U	0.014	U	0.014	U	**0.01**	J	0.015	U	0.014	U	0.014	U	**0.008**	J	0.016	U	0.014	U
Benzo(b)fluoranthene	> Sat	> Sat	> Sat	**0.01**	J	0.021	U	**0.033**	J	**0.006**	J	0.021	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U
Benzo(k)fluoranthene	> Sat	> Sat	> Sat	**0.01**	J	0.021	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U
Benzo(a)pyrene	> Sat	> Sat	0.53	**0.02**	J	0.018	U	**0.051**	J	**0.007**	J	0.017	U	0.016	U	0.016	U	**0.007**	J	0.017	U	0.016	U	0.016	U	**0.007**	J	0.018	U	0.016	U
Indeno(1,2,3-cd)pyrene	> Sat	> Sat	> Sat	**0.02**	J	0.026	U	**0.050**	J	**0.009**	J	0.026	U	0.024	U	0.024	U	**0.009**	J	0.026	U	0.024	U	0.024	U	**0.007**	J	0.027	U	0.024	U
Dibenz(a,h)anthracene	> Sat	> Sat	0.21	0.004	U	0.03	U	0.031	U	**0.005**	J	0.033	U	0.031	U	0.031	U	0.004	U	0.033	U	0.031	U	0.031	U	0.004	U	0.034	U	0.031	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	**0.02**	J	**0.039**	J	**0.061**	J	**0.01**	J	0.018	U	0.017	U	0.017	U	**0.02**	J	**0.034**	J	**0.025**	J	0.017	U	**0.009**	J	0.019	U	0.017	U
Total HPAHs				**0.16**		**0.08**		**0.37**		**0.10**		**0.06**		**0.07**		**0.04**		**0.106**		**0.136**		**0.120**		**0.028**		**0.080**		**0.178**		**0.077**	
Miscellaneous Semivolatiles				SVOCs																											
3- and 4-Methylphenol	n/a	n/a	n/a	0.003	U	0.055	U	0.051	U	**0.02**	J	0.055	U	0.051	U	0.051	U	**0.05**	J	**0.087**	J	**0.090**	J	0.051	U	0.003	U	0.056	U	0.051	U
Dibenzofuran	n/a	n/a	n/a	0.007	U	0.015	U	0.014	U	0.007	U	0.014	U	0.014	U	0.014	U	0.007	U	0.014	U	0.014	U	0.014	U	0.007	U	0.015	U	0.014	U
Butyl Benzyl Phthalate	n/a	n/a	n/a	0.02	U	0.028	U	0.026	U	0.02	U	0.028	U	0.026	U	0.026	U	0.02	U	0.028	U	0.026	U	0.026	U	0.02	U	0.028	U	0.026	U
Di-n-octyl Phthalate	n/a	n/a	n/a	0.003	U	0.035	U	0.032	U	0.003	U	0.035	U	0.032	U	0.032	U	0.003	U	0.035	U	0.032	U	0.032	U	0.003	U	0.036	U	0.032	U

Notes:
U = Not detected at or above the indicated quantitation limit
μg/L = micrograms per liter or parts per billion.
J = Estimated concentration; D = Reported result from a sample dilution
> Sat = Screening level greater than product saturation value
n/a = No screening level available for this compound
Stormwater compared to construction/excavation worker only

TABLE 6
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	DEQ Screening Levels			Groundwater												
	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	Construction/ Excavation Worker	EX-5 Water 12/20/00	EX-5 Water 03/07/02	EX-5 Water 10/04/02	EX-7 Water 12/20/00	EX-7 Water 03/06/02	EX-7 Water 10/03/02	MW-1 Water 12/20/00	MW-1 Water 03/07/02	MW-1 Water 10/03/02	MW-3 Water 12/20/00	MW-3 Water 03/07/02	MW-3 Dup Water 03/07/02	MW-3 Water 10/03/02
Low Molecular Weight PAHs				LPAHs												
Naphthalene	> Sat	> Sat	680	**0.009** J	**0.028** J	**0.022** J	0.008 U	**0.14** J	**0.022** J	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.012 U
Acenaphthylene	n/a	n/a	n/a	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.006 U	0.011 U	0.011 U	0.011 U
Acenaphthene	> Sat	> Sat	> Sat	**0.009** J	**0.024** J	**0.015** J	0.007 U	0.0089 U	0.0088 U	0.007 U	0.0088 U	0.0088 U	**0.17**	**0.21**	**0.23**	**0.33**
Fluorene	> Sat	> Sat	> Sat	0.006 U	0.013 U	0.012 U	0.006 U	0.013 U	0.012 U	0.006 U	0.012 U	0.014 U	0.006 U	0.012 U	0.012 U	0.012 U
Phenanthrene	n/a	n/a	n/a	**0.02** J	**0.034** J	**0.039** J	0.007 U	**0.016** J	**0.015** J	0.007 U	0.011 U	0.012 U	**0.13**	**0.18** J	**0.17** J	**0.27**
Anthracene	> Sat	> Sat	> Sat	0.006 U	0.016 U	**0.017** J	0.006 U	**0.019** J	**0.038** J	0.006 U	0.015 U	**0.028** J	**0.02** J	**0.049** J	**0.055** J	**0.092** J
2-Methylnaphthalene	n/a	n/a	n/a	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.008 U	0.012 U	0.012 U	0.012 U
Total LPAH				**0.038**	**0.086**	**0.093**	0.008	**0.18**	**0.08**	0.008	0.015	**0.03**	**0.32**	**0.44**	**0.46**	**0.69**
High Molecular Weight PAHs				HPAHs												
Fluoranthene	> Sat	> Sat	> Sat	**0.009** J	0.013 U	0.013 U	0.007 U	**0.018** J	**0.024** J	0.007 U	0.013 U	0.013 U	**0.01** J	**0.065** J	**0.071** J	**0.087** J
Pyrene	> Sat	> Sat	> Sat	**0.040** J	**0.046** J	**0.067** J	0.007 U	**0.022** J	**0.028** J	0.007 U	0.015 U	0.015 U	**0.05** J	**0.13** J	**0.11** J	**0.19** J
Benz(a)anthracene	> Sat	> Sat	9.1	**0.006** J	0.013 U	0.012 U	0.005 U	0.012 U	0.012 U	0.005 U	0.012 U	0.012 U	**0.008** J	0.012 U	**0.024** J	**0.048** J
Chrysene	> Sat	> Sat	> Sat	**0.008** J	0.015 U	0.014 U	0.006 U	0.015 U	0.014 U	0.006 U	0.014 U	0.014 U	**0.009** J	**0.033** J	**0.030** J	**0.062** J
Benzo(b)fluoranthene	> Sat	> Sat	> Sat	0.005 U	0.021 U	0.020 U	0.005 U	0.020 U	0.020 U	0.005 U	0.020 U	0.020 U	**0.006** J	0.020 U	0.020 U	**0.055** J
Benzo(k)fluoranthene	> Sat	> Sat	> Sat	**0.003** J	0.021 U	0.020 U	**0.004** J	0.020 U	0.020 U	0.003 U	0.020 U	0.020 U	**0.006** J	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	> Sat	> Sat	0.53	0.006 U	0.017 U	0.016 U	0.006 U	0.017 U	**0.019** J	0.006 U	0.016 U	0.016 U	**0.007** J	0.016 U	0.016 U	**0.077** J
Indeno(1,2,3-cd)pyrene	> Sat	> Sat	> Sat	**0.007** J	0.026 U	0.024 U	**0.005** J	0.025 U	0.024 U	0.004 U	0.024 U	0.024 U	**0.008** J	0.024 U	0.024 U	**0.053** J
Dibenz(a,h)anthracene	> Sat	> Sat	0.21	0.004 U	0.033 U	0.031 U	0.004 U	0.031 U	0.031 U	0.004 U	0.031 U	0.031 U	0.004 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	n/a	n/a	n/a	**0.03** J	**0.054** J	**0.031** J	**0.007** J	0.017 U	**0.021** J	0.005 U	0.017 U	0.017 U	**0.009** J	**0.039** J	0.017 U	**0.066** J
Total HPAHs				**0.103**	**0.100**	**0.098**	**0.016**	**0.040**	**0.092**	0.007	0.031	0.031	**0.113**	**0.267**	**0.235**	**0.638**
Miscellaneous Semivolatiles				SVOCs												
3- and 4-Methylphenol	n/a	n/a	n/a	**0.007** J	0.055 U	0.051 U	0.003 U	0.052 U	0.051 U	0.003 U	0.051 U	0.051 U	0.003 U	0.051 U	0.051 U	0.051 U
Dibenzofuran	n/a	n/a	n/a	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.007 U	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	n/a	n/a	n/a	0.02 U	0.028 U	0.026 U	0.02 U	**0.041** J	0.026 U	0.02 U	**0.052** J	0.026 U	0.02 U	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	n/a	n/a	n/a	0.003 U	0.035 U	0.032 U	0.003 U	0.033 U	0.032 U	0.003 U	0.032 U	0.032 U	0.003 U	0.032 U	0.032 U	0.032 U

Notes:
U = Not detected at or above the indicated quantitation limit
µg/L = micrograms per liter or parts per billion.
J = Estimated concentration; D = Reported result from a sample dilution
> Sat = Screening level greater than product saturation value
n/a = No screening level available for this compound
Stormwater compared to construction/excavation worker only

TABLE 6
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	DEQ Screening Levels			Groundwater																									
	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	Construction/ Excavation Worker	MW-4 Water 12/20/00		MW-4 Water 03/07/02		MW-4 Water 10/03/02		MW-5 Water 12/20/00		MW-5 Water 03/07/02		MW-5 Water 10/03/02		MW-5 Dup Water 10/03/02		MW-5 Water 02/11/04		MW-6 Water 10/25/01		MW-6 Dup Water 10/25/01		MW-6 Water 03/08/02		MW-6 Water 10/03/02		MW-6 Dup Water 10/03/02	
Low Molecular Weight PAHs				**LPAHs**																									
Naphthalene	> Sat	> Sat	680	0.008	U	0.014	U	0.012	U	0.008	U	**0.034**	J	0.012	U	**0.023**		**0.025**	J	5.00	U	5.00	U	**0.12**	J	**0.048**	J	**0.066**	J
Acenaphthylene	n/a	n/a	n/a	0.006	U	0.012	U	0.011	U	0.006	U	0.011	U	0.011	U	0.011	U	0.011	U	5.00	U	5.00	U	**0.038**	J	0.011	U	0.011	U
Acenaphthene	> Sat	> Sat	> Sat	**0.03**	J	**0.064**	J	**0.130**	J	0.007	U	0.0094	U	0.0088	U	0.0088	U	0.0088	U	5.00	U	5.00	U	0.0095	U	0.0088	U	**0.020**	J
Fluorene	> Sat	> Sat	> Sat	0.006	U	0.014	U	0.012	U	0.006	U	0.013	U	0.012	U	0.012	U	0.012	U	5.00	U	5.00	U	**0.02**	J	0.012	U	0.012	U
Phenanthrene	n/a	n/a	n/a	**0.06**	J	**0.082**	J	**0.086**	J	0.007	U	0.011	U	**0.021**	J	**0.021**	J	0.011	U	5.00	U	5.00	U	**0.13**	J	**0.039**	J	**0.059**	J
Anthracene	> Sat	> Sat	> Sat	**0.01**	J	**0.035**	J	**0.046**	J	0.006	U	0.016	U	**0.025**	J	**0.022**	J	0.015	U	5.00	U	5.00	U	**0.047**	J	**0.045**	J	**0.049**	J
2-Methylnaphthalene	n/a	n/a	n/a	0.008	U	0.013	U	0.012	U	0.008	U	0.013	U	0.012	U	0.012	U	0.012	U	5.00	U	5.00	U	**0.025**	J	0.012	U	0.012	U
Total LPAH				**0.10**		**0.18**		**0.26**		0.008		**0.03**		**0.05**		**0.07**		**0.025**						**0.38**		**0.13**		**0.19**	
High Molecular Weight PAHs				**HPAHs**																									
Fluoranthene	> Sat	> Sat	> Sat	**0.02**	J	**0.04**	J	0.013	U	0.007	U	0.014	U	**0.031**	J	**0.026**	J	0.013	U	5.00	U	5.00	U	**0.18**	J	**0.08**	J	**0.12**	J
Pyrene	> Sat	> Sat	> Sat	**0.05**	J	**0.11**	J	**0.15**	J	0.007	U	**0.024**	J	**0.037**	J	**0.034**	J	0.015	U	5.00	U	5.00	U	**0.25**		**0.12**	J	**0.20**	
Benz(a)anthracene	> Sat	> Sat	9.1	**0.01**	J	**0.053**	J	**0.038**	J	0.005	U	0.013	U	**0.030**	J	0.012	U	0.012	U	5.00	U	5.00	U	**0.077**	J	**0.033**	J	**0.042**	J
Chrysene	> Sat	> Sat	> Sat	**0.02**	J	**0.048**	J	**0.054**	J	0.006	U	0.015	U	**0.022**	J	0.014	U	0.014	U	5.00	U	5.00	U	**0.087**	J	**0.038**	J	**0.052**	J
Benzo(b)fluoranthene	> Sat	> Sat	> Sat	**0.01**	J	0.021	U	**0.044**	J	0.005	U	0.021	U	0.020	U	0.020	U	0.020	U	5.00	U	5.00	U	**0.088**	J	**0.037**	J	**0.057**	J
Benzo(k)fluoranthene	> Sat	> Sat	> Sat	**0.01**	J	0.021	U	0.020	U	0.003	U	0.021	U	0.020	U	0.020	U	0.020	U	5.00	U	5.00	U	**0.045**	J	0.020	U	0.020	U
Benzo(a)pyrene	> Sat	> Sat	0.53	**0.01**	J	0.018	U	**0.043**	J	0.006	U	0.018	U	0.016	U	0.016	U	0.016	U	5.00	U	5.00	U	**0.096**	J	**0.028**	J	**0.057**	J
Indeno(1,2,3-cd)pyrene	> Sat	> Sat	> Sat	**0.01**	J	0.026	U	**0.032**	J	0.004	U	0.026	U	0.024	U	0.024	U	0.024	U	5.00	U	5.00	U	**0.088**	J	**0.037**	J	**0.057**	J
Dibenz(a,h)anthracene	> Sat	> Sat	0.21	0.004	U	0.033	U	0.031	U	0.004	U	0.033	U	0.031	U	0.031	U	0.031	U	5.00	U	5.00	U	0.033	U	0.031	U	0.031	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	**0.02**	J	0.018	U	**0.048**	J	0.005	U	0.018	U	0.017	U	0.017	U	0.017	U	5.00	U	5.00	U	**0.09**	J	**0.048**	J	**0.071**	J
Total HPAHs				**0.160**		**0.251**		**0.409**		0.007		**0.02**		**0.12**		**0.09**								**1.00**		**0.42**		**0.66**	
Miscellaneous Semivolatiles				**SVOCs**																									
3- and 4-Methylphenol	n/a	n/a	n/a	0.003	U	0.056	U	0.051	U	0.003	U	0.055	U	0.051	U	0.051	U	0.051	U	5.00	U	5.00	U	**0.073**	J	0.051	U	0.051	U
Dibenzofuran	n/a	n/a	n/a	0.095	U	0.015	U	0.014	U	0.007	U	0.015	U	0.200	U	0.014	U	0.014	U	5.00	U	5.00	U	0.015	U	0.014	U	0.014	U
Butyl Benzyl Phthalate	n/a	n/a	n/a	0.02	U	0.028	U	0.026	U	0.02	U	0.028	U	**0.048**	J	0.026	U	0.026	U	5.00	U	5.00	U	0.028	U	0.026	U	0.026	U
Di-n-octyl Phthalate	n/a	n/a	n/a	0.003	U	0.035	U	0.032	U	0.003	U	0.035	U	0.014	U	0.014	U	0.032	U	5.00	U	5.00	U	0.035	U	0.032	U	0.032	U

Notes:
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TABLE 6
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	DEQ Screening Levels			Groundwater																									
	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	Construction/ Excavation Worker	MW-7 Water 10/25/01		MW-7 Water 03/08/02		MW-7 Water 10/04/02		MW-7 Water 02/12/04		MW-7 Dup Water 02/12/04		MW-8 Water 10/25/01		MW-8 Water 03/07/02		MW-8 Water 10/04/02		MW-8 Water 02/12/04		MW-9 Water 01/22/02		MW-9 Water 03/06/02		MW-9 Dup Water 03/06/02		MW-9 Water 10/03/02	
Low Molecular Weight PAHs				**LPAHs**																									
Naphthalene	> Sat	> Sat	680	5.00	U	0.086	J	0.020	J	0.012	U	0.012	U	5.00	U	0.16	J	0.38		0.031	J	0.17	J	0.013	U	0.012	U	0.012	U
Acenaphthylene	n/a	n/a	n/a	5.00	U	0.025	J	0.011	U	0.011	U	0.011	U	5.00	U	0.011	U	0.210		0.011	U	0.054	J	0.11	J	0.069	J	0.011	U
Acenaphthene	> Sat	> Sat	> Sat	5.00	U	0.0092	U	0.0088	U	0.0088	U	0.045	J	5.00	U	0.58		0.78		0.34		0.120	J	0.12	J	0.15	J	0.25	
Fluorene	> Sat	> Sat	> Sat	5.00	U	0.013	U	0.012	U	0.012	U	0.012	U	5.00	U	0.56		0.91		0.36		0.012	U	0.01	U	0.012	U	0.012	U
Phenanthrene	n/a	n/a	n/a	5.00	U	0.077	J	0.034	J	0.024	J	0.036	J	5.00	U	1.2		1.7		0.22		0.26		0.22		0.16	J	0.20	J
Anthracene	> Sat	> Sat	> Sat	5.00	U	0.039	J	0.031	J	0.019	J	0.029	J	5.00	U	0.097	J	0.380		0.028	J	0.090	J	0.098	J	0.067	J	0.079	J
2-Methylnaphthalene	n/a	n/a	n/a	5.00	U	0.034	J	0.012	U	0.012	U	0.012	U	5.00	U	0.081	J	0.160	J	0.012	U	0.020	J	0.012	U	0.012	U	0.012	U
Total LPAH						0.26		0.09		0.043		0.11				2.68		4.52		0.98		0.71		0.55		0.45		0.53	
High Molecular Weight PAHs				**HPAHs**																									
Fluoranthene	> Sat	> Sat	> Sat	5.00	U	0.061	J	0.013	U	0.013	U	0.013	U	5.00	U	0.22		0.73		0.035	J	0.25		0.33		0.13	J	0.11	J
Pyrene	> Sat	> Sat	> Sat	5.00	U	0.089	J	0.025	J	0.015	U	0.015	U	5.00	U	0.34		1.10		0.066	J	0.41		0.48		0.26		0.24	
Benz(a)anthracene	> Sat	> Sat	9.1	5.00	U	0.044	J	0.012	U	0.012	U	0.012	U	5.00	U	0.071	J	0.390		0.012	U	0.18	J	0.23		0.096	J	0.075	J
Chrysene	> Sat	> Sat	> Sat	5.00	U	0.045	J	0.014	U	0.014	U	0.014	U	5.00	U	0.16	J	0.56		0.014	U	0.18	J	0.24		0.10	J	0.07	J
Benzo(b)fluoranthene	> Sat	> Sat	> Sat	5.00	U	0.021	U	0.020	U	0.020	U	0.020	U	5.00	U	0.064	J	0.350		0.020	U	0.18	J	0.28		0.098	J	0.074	J
Benzo(k)fluoranthene	> Sat	> Sat	> Sat	5.00	U	0.021	U	0.020	U	0.020	U	0.020	U	5.00	U	0.02	U	0.13	J	0.02	U	0.078	J	0.096	J	0.027	J	0.033	J
Benzo(a)pyrene	> Sat	> Sat	0.53	5.00	U	0.017	U	0.016	U	0.016	U	0.016	U	5.00	U	0.089	J	0.360		0.016	U	0.19	J	0.26		0.094	J	0.077	J
Indeno(1,2,3-cd)pyrene	> Sat	> Sat	> Sat	5.00	U	0.026	U	0.024	U	0.024	U	0.024	U	5.00	U	0.04	J	0.25		0.02	U	0.12	J	0.15	J	0.062	J	0.053	J
Dibenz(a,h)anthracene	> Sat	> Sat	0.21	5.00	U	0.032	U	0.031	U	0.031	U	0.031	U	5.00	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U	0.031	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	5.00	U	0.099	J	0.017	U	0.017	U	0.017	U	5.00	U	0.057	J	0.310		0.017	U	0.130	J	0.16	J	0.065	J	0.071	J
Total HPAHs						0.34		0.03								1.04		4.18		0.101		1.72		2.23		0.93		0.81	
Miscellaneous Semivolatiles				**SVOCs**																									
3- and 4-Methylphenol	n/a	n/a	n/a	5.00	U	1.1		0.05	U	0.051	U	0.051	U	5.00	U	0.22	J	1.60		0.051	U	0.051	U	0.052	U	0.051	U	0.051	U
Dibenzofuran	n/a	n/a	n/a	5.00	U	0.014	U	0.014	U	0.014	U	0.014	U	5.00	U	0.18	J	0.014	U	0.092	J	0.014	U	0.014	U	0.014	U	0.014	U
Butyl Benzyl Phthalate	n/a	n/a	n/a	5.00	U	0.027	U	0.026	U	0.026	U	0.026	U	5.00	U	0.13	J	0.026	U	0.026	U	0.026	U	0.050	J	0.074	J	0.026	U
Di-n-octyl Phthalate	n/a	n/a	n/a	5.00	U	0.034	U	0.032	U	0.032	U	0.032	U	5.00	U	0.032	U	0.032	U	0.032	U	0.032	U	0.033	U	0.032	U	0.032	U

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TABLE 6
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	DEQ Screening Levels			Groundwater													
	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	Construction/ Excavation Worker	MW-10 Water 01/22/02	MW-10 Water 03/06/02	MW-10 Water 10/03/02	MW-11 Water 01/22/02	MW-11 Water 03/08/02	MW-12 Water 01/22/02	MW-12 Water 03/06/02	MW-12 Water 10/04/02	MW-13 Water 01/22/02	MW-13 Dup Water 01/22/02	MW-13 Water 03/06/02	MW-13 Water 10/04/02	MW-14 Water 02/11/04	MW-15 Water 02/12/04
Low Molecular Weight PAHs				**LPAHs**													
Naphthalene	> Sat	> Sat	680	**0.058** J	**0.24**	0.012 U	0.012 U	0.12 U	**0.11** J	**0.12** J	0.012 U	**0.190** J	**0.25**	**0.24**	**0.10** J	**0.023** J	**0.016** J
Acenaphthylene	n/a	n/a	n/a	**0.019** J	**0.022** J	0.011 U	0.011 U	0.110 U	**0.017** J	**0.028** J	0.011 U	**0.031** J	**0.042** J	**0.054** J	**0.022** J	0.011 U	0.011 U
Acenaphthene	> Sat	> Sat	> Sat	**0.120** J	0.009 U	0.0088 U	**0.43**	**1.6** JD	**0.190** J	**0.15** J	**0.25**	**0.087** J	**0.093** J	**0.18** J	**0.25**	**0.0310** J	0.0088 U
Fluorene	> Sat	> Sat	> Sat	0.012 U	0.013 U	0.012 U	**0.86**	**2.0** D	0.012 U	0.013 U	0.012 U	**0.041** J	**0.033** J	**0.037** J	0.012 U	0.012 U	0.012 U
Phenanthrene	n/a	n/a	n/a	**0.073** J	**0.08** J	**0.012** J	**1.80**	**3.0** D	**0.11** J	**0.11** J	**0.15** J	**0.11** J	**0.13** J	**0.19** J	**0.14** J	0.011 U	0.011 U
Anthracene	> Sat	> Sat	> Sat	**0.032** J	**0.029** J	**0.029** J	**0.41**	**0.660** JD	**0.019** J	0.016 U	**0.054** J	**0.025** J	**0.033** J	**0.041** J	**0.019** J	0.015 U	**0.070** J
2-Methylnaphthalene	n/a	n/a	n/a	0.012 U	**0.015** J	0.012 U	**20** D	**24** D	**0.036** J	**0.034** J	0.012 U	**0.058** J	**0.073** J	**0.056** J	**0.026** J	0.012 U	0.012 U
Total LPAH				**0.30**	**0.39**	**0.04**	**23.50**	**31.26**	**0.48**	**0.44**	**0.45**	**0.54**	**0.65**	**0.80**	**0.56**	**0.054**	**0.086**
High Molecular Weight PAHs				**HPAHs**													
Fluoranthene	> Sat	> Sat	> Sat	**0.081** J	**0.10** J	**0.016** J	**0.43**	**0.38** JD	**0.036** J	**0.058** J	0.013 U	**0.10** J	**0.12** J	**0.14** J	**0.058** J	0.013 U	0.013 U
Pyrene	> Sat	> Sat	> Sat	**0.130** J	**0.15** J	**0.059** J	**0.61**	**0.89** JD	**0.076** J	**0.11** J	**0.10** J	**0.14** J	**0.19** J	**0.19** J	**0.11** J	0.015 U	**0.021** J
Benz(a)anthracene	> Sat	> Sat	9.1	**0.078** J	**0.081** J	**0.026** J	0.012 U	**0.23** JD	0.012 U	**0.052** J	0.012 U	**0.038** J	**0.053** J	**0.063** J	0.012 U	0.012 U	0.012 U
Chrysene	> Sat	> Sat	> Sat	**0.084** J	**0.094** J	**0.017** J	**0.13** J	**0.50** JD	**0.047** J	**0.046** J	0.014 U	**0.052** J	**0.056** J	**0.075** J	0.014 U	0.014 U	0.014 U
Benzo(b)fluoranthene	> Sat	> Sat	> Sat	**0.056** J	**0.070** J	0.020 U	0.02 U	0.20 U	0.020 U	0.021 U	0.020 U	0.020 U	**0.072** J	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	> Sat	> Sat	> Sat	0.020 U	**0.037** J	0.020 U	0.02 U	0.20 U	0.020 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	> Sat	> Sat	0.53	**0.071** J	**0.090** J	0.016 U	0.016 U	0.16 U	0.016 U	0.018 U	0.016 U	**0.044** J	**0.072** J	**0.098** J	0.016 U	0.016 U	0.016 U
Indeno(1,2,3-cd)pyrene	> Sat	> Sat	> Sat	0.024 U	**0.052** J	0.024 U	0.024 U	0.24 U	0.024 U	0.026 U	0.024 U	0.024 U	**0.053** J	**0.082** J	0.024 U	0.024 U	0.024 U
Dibenz(a,h)anthracene	> Sat	> Sat	0.21	0.031 U	0.031 U	0.031 U	0.031 U	0.31 U	0.031 U	0.033 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U
Benzo(g,h,i)perylene	n/a	n/a	n/a	**0.047** J	**0.061** J	0.017 U	0.017 U	0.17 U	0.017 U	**0.047** J	0.017 U	0.017 U	**0.072** J	**0.110** J	**0.021** J	0.017 U	0.017 U
Total HPAHs				**0.55**	**0.74**	**0.12**	**1.17**	**2.00**	**0.16**	**0.31**	**0.10**	**0.37**	**0.69**	**0.76**	**0.26**		**0.021**
Miscellaneous Semivolatiles				**SVOCs**													
3- and 4-Methylphenol	n/a	n/a	n/a	0.051 U	0.053 U	0.051 U	0.051 U	0.510 U	**1.9**	**0.41** J	**0.07** J	**28** D	**31** D	**1.5**	**0.4** J	0.051 U	0.051 U
Dibenzofuran	n/a	n/a	n/a	0.014 U	0.014 U	0.014 U	0.014 U	**0.81** JD	0.20 U	0.015 U	0.014 U	**0.018** J	**0.021** J	**0.021** J	0.014 U	0.014 U	0.014 U
Butyl Benzyl Phthalate	n/a	n/a	n/a	**0.045** J	**0.040** J	0.026 U	0.026 U	0.26 U	0.20 U	0.028 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U	0.026 U	0.026 U
Di-n-octyl Phthalate	n/a	n/a	n/a	0.032 U	0.033 U	0.032 U	0.032 U	0.32 U	0.20 U	0.035 U	0.032 U	0.032 U	0.032 U	0.034 U	0.032 U	0.032 U	0.032 U

Notes:
U = Not detected at or above the indicated quantitation limit
µg/L = micrograms per liter or parts per billion.
J = Estimated concentration; D = Reported result from a sample dilution
> Sat = Screening level greater than product saturation value
n/a = No screening level available for this compound
Stormwater compared to construction/excavation worker only

TABLE 6
PAHs and SVOCs (µg/L)
Groundwater and Stormwater
McCall Oil and Chemical

	DEQ Screening Levels			Storm Water																	
	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	Construction/ Excavation Worker	S-1 Water 12/20/00		S-1 Water 03/06/02		S-2 Water 12/20/00		S-2 Water 03/06/02		S-3 Water 12/20/00		S-3 Water 03/06/02		S-4 Water 12/20/00		S-4 Duplicate Water 12/20/00		S-4 Water 04/09/02	
Low Molecular Weight PAHs				LPAHs																	
Naphthalene	> Sat	> Sat	680	0.03	J	0.03	J	0.07	J	0.025	J	0.07	J	0.025	J	0.04	J	0.04	J	0.012	U
Acenaphthylene	n/a	n/a	n/a	0.006	J	0.011	U	0.02	J	0.011	U	0.095	U	0.011	U	0.095	U	0.096	U	0.011	U
Acenaphthene	> Sat	> Sat	> Sat	0.02	J	0.0088	U	0.02	J	0.0092	U	0.095	U	0.0089	U	0.14		0.12		0.085	J
Fluorene	> Sat	> Sat	> Sat	0.02	J	0.012	U	0.04	J	0.013	U	0.02	J	0.013	U	0.36		0.34		0.17	J
Phenanthrene	n/a	n/a	n/a	0.07	J	0.032	J	0.25		0.043	J	0.20		0.054	J	0.46		0.35		0.073	J
Anthracene	> Sat	> Sat	> Sat	0.006	U	0.015	U	0.02	J	0.016	U	0.095	U	0.015	U	0.02	J	0.01	J	0.015	U
2-Methylnaphthalene	n/a	n/a	n/a	0.03	J	0.016	J	0.05	J	0.014	J	0.096		0.012	U	0.09	J	0.10		0.012	U
Total LPAH				0.176		0.078		0.470		0.082		0.386		0.079		1.110		0.960		0.328	
High Molecular Weight PAHs				HPAHs																	
Fluoranthene	> Sat	> Sat	> Sat	0.02	J	0.013	U	0.099		0.022	J	0.06	J	0.023	J	0.06	J	0.05	J	0.01	U
Pyrene	> Sat	> Sat	> Sat	0.02	J	0.015	U	0.12		0.025	J	0.03	J	0.022	J	0.19		0.16		0.10	J
Benz(a)anthracene	> Sat	> Sat	9.1	0.005	U	0.012	U	0.03	J	0.013	U	0.007	J	0.012	U	0.03	J	0.02	J	0.012	U
Chrysene	> Sat	> Sat	> Sat	0.008	J	0.014	U	0.06	J	0.015	U	0.03	J	0.015	U	0.12		0.09	J	0.014	U
Benzo(b)fluoranthene	> Sat	> Sat	> Sat	0.006	J	0.020	U	0.04	J	0.021	U	0.01	J	0.020	U	0.03	J	0.03	J	0.020	U
Benzo(k)fluoranthene	> Sat	> Sat	> Sat	0.004	J	0.020	U	0.03	J	0.021	U	0.008	J	0.020	U	0.02	J	0.01	J	0.020	U
Benzo(a)pyrene	> Sat	> Sat	0.53	0.006	U	0.016	U	0.03	J	0.017	U	0.095	U	0.017	U	0.03	J	0.02	J	0.016	U
Indeno(1,2,3-cd)pyrene	> Sat	> Sat	> Sat	0.006	J	0.024	U	0.04	J	0.026	U	0.01	J	0.025	U	0.02	J	0.02	J	0.024	U
Dibenz(a,h)anthracene	> Sat	> Sat	0.21	0.004	U	0.031	U	0.009	J	0.032	U	0.19	U	0.031	U	0.009	J	0.008	J	0.031	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	0.007	J	0.017	U	0.06	J	0.018	U	0.01	J	0.017	U	0.04	J	0.03	J	0.017	U
Total HPAHs				0.071				0.52		0.047		0.17		0.045		0.55		0.44		0.10	
Miscellaneous Semivolatiles				SVOCs																	
3- and 4-Methylphenol	n/a	n/a	n/a	0.3	J	0.23	J	0.49		0.089	J	0.48	U	0.220	J	0.2	J	0.2	J	0.051	U
Dibenzofuran	n/a	n/a	n/a	0.01	J	0.014	U	0.02	J	0.014	U	0.01	U	0.019	J	0.13		0.11		0.11	J
Butyl Benzyl Phthalate	n/a	n/a	n/a	0.1	J	0.19	J	0.1	J	0.05	J	0.08	J	0.092	J	0.05	J	0.04	J	0.14	J
Di-n-octyl Phthalate	n/a	n/a	n/a	0.003	U	0.032	U	0.003	U	0.032	U	0.95	U	0.033	U	0.95	U	0.96	U	0.032	U

Notes:
U = Not detected at or above the indicated quantitation limit
µg/L = micrograms per liter or parts per billion.
J = Estimated concentration; D = Reported result from a sample dilution
> Sat = Screening level greater than product saturation value
n/a = No screening level available for this compound
Stormwater compared to construction/excavation worker only

TABLE 7
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER (μg/L)
McCall Oil and Chemical

Sample ID	Date	Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene
Detection Frequency		17%	1%	7%	1%	6%	17%	23%	9%	16%	2%	24%	7%	25%	1%	2%	3%	2%	2%	2%	2%	2%
Volatilization (Outdoor Air)		6,200	–	2,200,000	–	2,000,000	–	1,600,000	–	> Sat	13,000	650	> Sat	8,600	–	> Sat	> Sat	> Sat	> Sat	> Sat	> Sat	–
Vapor Intrusion (Indoor Air)		840	–	330,000	--	390,000	–	410,000	–	> Sat	2,700	110	> Sat	1,300	–	> Sat	> Sat	> Sat	> Sat	> Sat	51,000	–
EX-1	05/02/97	0.5 U	0.5 U	**1.8**	0.5 U	0.5 U	**4.4**	**9.9**	**5.9**	**240**	0.5 U	**410**	0.5 U	**3300**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	05/02/97	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	**3.9**	**8.3**	**5.2**	**270**	0.5 U	**470**	0.5 U	**3600**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	02/04/99	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**120**	50 U	**220**	50 U	**2600**	50 U	50 U	50 U	50 U	200 U	200 U	200 U	200 U
EX-1	02/04/99	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**130**	50 U	**250**	50 U	**3000**	50 U	50 U	50 U	50 U	200 U	200 U	200 U	200 U
EX-1	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.53**	0.5 U	0.5 U	**9.1**	0.5 U	**20**	0.5 U	**400 D**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	03/07/02	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	**3.2 D**	2.5 U	2.5 U	**13 D**	2.5 U	**32 D**	2.5 U	**480 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	10/03/02	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	**11**	2.5 U	**25**	2.5 U	**340 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	02/11/04	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	**22 D**	2.5 U	**82 D**	2.5 U	**1700 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1 Dupe	02/11/04	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	**24 D**	2.5 U	**89 D**	2.5 U	**1700 D**	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-2	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	02/03/99	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	**0.65**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	02/13/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 7
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER (µg/L)
McCall Oil and Chemical

		Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene
Detection Frequency		17%	1%	7%	1%	6%	17%	23%	9%	16%	2%	24%	7%	25%	1%	2%	3%	2%	2%	2%	2%	2%
Volatilization (Outdoor Air)		6,200	–	2,200,000	–	2,000,000	–	1,600,000	–	> Sat	13,000	650	> Sat	8,600	–	> Sat	> Sat	> Sat	> Sat	> Sat	> Sat	–
Vapor Intrusion (Indoor Air)		840	–	330,000	–	390,000	–	410,000	–	> Sat	2,700	110	> Sat	1,300	–	> Sat	> Sat	> Sat	> Sat	> Sat	51,000	–
EX-5	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	10/04/02	0.5 U	0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	05/02/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**2.9**	0.5 U	0.5 U	0.5 U	**2.6**	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	02/04/99	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**3.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	05/02/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	05/01/97	0.5 U	0.5 U	**0.9**	0.5 U	0.5 U	**7.4**	**0.7**	**12.0**	**8.0**	0.5 U	**28.0**	0.5 U	**110**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.8**	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.53**	0.5 U	0.5 U	**0.56**	0.5 U	**3.5**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**9.7**	0.5 U	0.5 U	0.5 U	0.5 U	**3.2**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.6**	0.5 U	0.5 U	0.5 U	**0.9**	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.58**	**2.2**	0.5 U	0.5 U	0.5 U	**5.2**	0.5 U	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	05/01/97	**5.9**	**0.5**	0.5 U	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7 Tot	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	02/04/99	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	12/20/00	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	03/07/02	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3 Dupe	03/07/02	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	10/03/02	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.5**	**4.9**	0.5 U	0.5 U	0.5 U	**8.1**	0.5 U	**11.0**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**4.4**	0.5 U	0.5 U	0.5 U	**2.0**	0.5 U	**2.5**	**1.9**	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	12/20/00	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	03/07/02	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	10/03/02	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.59**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 7
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER (µg/L)
McCall Oil and Chemical

		Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene
Detection Frequency		17%	1%	7%	1%	6%	17%	23%	9%	16%	2%	24%	7%	25%	1%	2%	3%	2%	2%	2%	2%	2%
Volatilization (Outdoor Air)		6,200	–	2,200,000	–	2,000,000	–	1,600,000	–	> Sat	13,000	650	> Sat	8,600	–	> Sat	> Sat	> Sat	> Sat	> Sat	> Sat	–
Vapor Intrusion (Indoor Air)		840	–	330,000	–	390,000	–	410,000	–	> Sat	2,700	110	> Sat	1,300	–	> Sat	> Sat	> Sat	> Sat	> Sat	51,000	–
MW-5	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5 Dupe	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-6	10/25/01	5 U	2.5 U	2.5 U	50 U	**2.8**	**6.4**	**422**	2.5 U	**7.45**	5 U	**20.5**	5 U	**23**	2.5 U	5 U	10 U	5 U	10.0 U	5.0 U	2.5 U	25 U
MW-6 Dupe	10/25/01	5 U	2.5 U	2.5 U	50 U	**2.6**	**6.9**	**411**	2.5 U	**7.65**	5 U	**20.6**	5 U	**21.2**	2.5 U	5 U	10 U	5 U	10.0 U	5.0 U	2.5 U	25 U
MW-6	03/08/02	**5.6** D	2.5 U	**3.8** D	2.5 U	**4.0** D	**11.0** D	**700** D	2.5 U	**22** D	2.5 U	**200** D	2.5 U	**360** D	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-6	10/03/02	**11.0** D	1.3 U	**2.9** D	1.3 U	**3.8** D	**7.5** D	**770** D	1.3 U	**7.7** D	1.3 U	**33** D	1.3 U	**40** D	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6 Dupe	10/03/02	**12.0** D	1.3 U	**3.0** D	1.3 U	**3.9** D	**7.8** D	**740** D	1.3 U	**8.0** D	1.3 U	**36** D	1.3 U	**43** D	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	02/12/04	**11.0** D	1.3 U	**2.5** D	1.3 U	**3.6** D	**4.5** D	**630** D	1.3 U	**7.6** D	1.3 U	**71** D	1.3 U	**70** D	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-7	10/25/01	1.0 U	0.5 U	0.5 U	10.0 U	0.5 U	0.5 U	**2.9**	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	0.5 U	5.0 U
MW-7	03/08/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	**3.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.5**	0.5 U	0.5 U	0.5 U	0.5 U	**2.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	02/12/04	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7 Dupe	02/12/04	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	10/25/01	1.0 U	0.5 U	0.5 U	10.0 U	0.5 U	0.5 U	**1.21**	0.5 U	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	2.0 U	1.0 U	0.5 U	5.0 U
MW-8	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9 Dupe	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.57**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	02/13/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.66**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-11	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	0.5 U	**1.6**	0.5 U	0.5 U	**4.7**	**3.1**	**8.2**	**4.2**	**6.1**	**4.5**	**2.4**
MW-11	03/08/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.2**	0.5 U	**1.1**	0.5 U	0.5 U	**2.9**	**2.3**	**5.2**	**3.6**	**5.2**	**3.3**	**2.3**

TABLE 7
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER (µg/L)
McCall Oil and Chemical

		Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Carbon Disulfide	*trans*- 1, 2-dichloroethene	1,1-Dichloroethane	*cis*-1, 2-dichloroethene	Chloroform	1,1,1-Trichloroethane	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Dibromochloromethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,2,4-Trimethylbenzene	n-Butylbenzene
Detection Frequency		17%	1%	7%	1%	6%	17%	23%	9%	16%	2%	24%	7%	25%	1%	2%	3%	2%	2%	2%	2%	2%
Volatilization (Outdoor Air)		6,200	–	2,200,000	–	2,000,000	–	1,600,000	–	> Sat	13,000	650	> Sat	8,600	–	> Sat	> Sat	> Sat	> Sat	> Sat	> Sat	–
Vapor Intrusion (Indoor Air)		840	–	330,000	–	390,000	–	410,000	–	> Sat	2,700	110	> Sat	1,300	–	> Sat	> Sat	> Sat	> Sat	> Sat	51,000	–
MW-12	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.52**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13 Dupe	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-14	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U

Notes:

U = Not detected at indicated detection limit; J = Estimated concentration

Naphthalene reported and evaluated with other PAHs in semivolatile fraction

Bold value = Detected concentration; Only those VOCs detected in one or more samples are presented

Shaded cell indicates chemical concentration exceeds one or more screening levels

Screening levels from DEQ *Risk-Based Guidance for Petroleum-Contaminated Sites*

> Sat = screening level exceeds free product saturation level; impossibly large (i.e., not significantly toxic)

Table 8
Metals
Groundwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic		Chromium		Copper	
Monitoring Wells - Groundwater µg/L (ppb)									
EX-1	Total	Water	02/11/04	3.0					
EX-1 Duplicate	Total	Water	02/11/04	2.6					
EX-1	Dissolved	Water	02/11/04	1.6					
EX-1 Duplicate	Dissolved	Water	02/11/04	1.4					
EX-2	Total	Water	02/11/04	57.1					
EX-2	Dissolved	Water	02/11/04	65.8					
EX-3	Total	Water	02/12/04	87.2					
EX-3	Dissolved	Water	02/12/04	86.1					
EX-4/MW-2	Dissolved	Water	12/20/00	8.8		8.1		2.0	
EX-4/MW-2	Total	Water	03/07/02	56.8		5.8		7.7	
EX-4/MW-2	Dissolved	Water	03/07/02	47.5		2.4		0.6	
EX-4/MW-2	Dissolved	Water	10/03/02	14.9		0.4		2.5	
EX-4/MW-2	Total	Water	02/13/04	53.1					
EX-4/MW-2	Dissolved	Water	02/13/04	55.2					
EX-7	Total	Water	02/12/04	0.5					
EX-7	Dissolved	Water	02/12/04	0.5	U				
MW-1	Dissolved	Water	12/20/00	2.50	U	9.5		514	
MW-1	Total	Water	03/07/02	0.80		1.9		139	
MW-1	Dissolved	Water	03/07/02	1.00	U	2.0		130	
MW-1	Dissolved	Water	10/03/02	0.8		0.3		196	
MW-1	Total	Water	02/11/04	0.6		1.2		82.8	
MW-1	Dissolved	Water	02/11/04	0.6		0.7		70.8	
MW-3	Dissolved	Water	12/20/00	39.7		0.4	U	0.5	
MW-3	Total	Water	03/07/02	42.8		6.4		11.0	
MW-3 Duplicate	Total	Water	03/07/02	41.6		6.7		7.8	
MW-3	Dissolved	Water	03/07/02	43.4		5.7		1.3	
MW-3 Duplicate	Dissolved	Water	03/07/02	43.4		2.5		0.7	
MW-3	Dissolved	Water	10/03/02	49		0.7		0.9	
MW-3	Total	Water	02/11/04	46.9		2.5		1.8	
MW-3	Dissolved	Water	02/11/04	46.1		2.4		0.4	
MW-4	Dissolved	Water	12/20/00	12.7		1.00	U	1.00	U
MW-4	Total	Water	03/07/02	9.2		8.70		29.90	
MW-4	Dissolved	Water	03/07/02	10.0		3.30		1.20	
MW-4	Dissolved	Water	10/03/02	16.5		0.20	U	0.70	
MW-5	Total	Water	02/11/04	15.7					
MW-5	Dissolved	Water	02/11/04	15.4					

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Table 8
Metals
Groundwater
McCall Oil and Chemical

Location		Matrix	Date Sampled	Arsenic	Chromium		Copper	
MW-6	Total	Water	10/25/01	29.8	67.8		98.8	
MW-6 Duplicate	Total	Water	10/25/01	27.3	35.0		48.6	
MW-6	Dissolved	Water	10/25/01	18.2	1.00	U	2.00	U
MW-6 Duplicate	Dissolved	Water	10/25/01	19.0	1.00	U	2.00	U
MW-6	Total	Water	03/08/02	6.8	9.6		18.3	
MW-6	Dissolved	Water	03/08/02	20.4	0.80		2.5	
MW-6	Dissolved	Water	10/03/02	23.5	0.20		0.6	
MW-6 Duplicate	Dissolved	Water	10/03/02	23.3	0.30		0.9	
MW-6	Total	Water	02/12/04	22.6				
MW-6	Dissolved	Water	02/12/04	22.6				
MW-7	Total	Water	10/25/01	18.1	127		164	
MW-7	Dissolved	Water	10/25/01	3.04	1.00	U	2.00	U
MW-7	Total	Water	03/08/02	4.4	9.1		19.1	
MW-7	Dissolved	Water	03/08/02	3.5	2.3		1.3	
MW-7	Dissolved	Water	10/04/02	9.1	2.1		0.7	
MW-7	Total	Water	02/12/04	5	0.7		0.5	
MW-7 Duplicate	Total	Water	02/12/04	5	0.8		0.4	
MW-7	Dissolved	Water	02/12/04	5.1	2.0		0.3	
MW-7 Duplicate	Dissolved	Water	02/12/04	5.1	0.7		0.3	
MW-8	Total	Water	10/25/01	43.9	225		394	
MW-8	Dissolved	Water	10/25/01	2.33	1.00	U	2.00	U
MW-8	Total	Water	03/07/02	4.3	14.7		36.1	
MW-8	Dissolved	Water	03/07/02	8.6	2.9		1.3	
MW-8	Dissolved	Water	10/04/02	9.6	1.4		0.3	
MW-8	Total	Water	02/12/04	5.4	1.7		2.0	
MW-8	Dissolved	Water	02/12/04	5.6	0.8		0.2	
MW-9	Total	Water	02/13/04	18.3				
MW-9	Dissolved	Water	02/13/04	19.0				
MW-10	Total	Water	02/13/04	30.9				
MW-10	Dissolved	Water	02/13/04	28.9				
MW-12	Total	Water	02/13/04	23.3				
MW-12	Dissolved	Water	02/13/04	23.7				
MW-14	Total	Water	02/12/04	1.5	1.3		1.7	
MW-14	Dissolved	Water	02/12/04	1.5	2.6		1.3	
MW-15	Total	Water	02/12/04	3.5				
MW-15	Dissolved	Water	02/12/04	3.4				

Note: U = not detected at method reporting limit. µg/L = micrograms per liter. ppb = parts per billion.

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Table 9
TPH in Upland Soil
McCall/GWCC

Risk-Based Concentrations (DEQ, 2003)		TPH - FIQ Gasoline		Diesel		Heavy Fuel Oil	
Direct Contact, Occupational		22,000		70,000		N/A	
Direct Contact, Construction		13,000		23,000		N/A	
Direct Contact, Excavation		> Maximum		> Maximum		N/A	
Volatilization, Outdoor Air		80,000		> Maximum		N/A	
Vapor Intrusion, Indoor Air		> Maximum		> Maximum		N/A	
Location	**Date**	**Analytical Result in mg/kg**					
GP-4 10-12	12/11/00	**39**	H	**220**	F	**200**	F
GP-7 2-4	12/14/00	10	U	**5,500**	DH	**4,100**	DL
GP-9 10-12	12/12/00	**290**	H	**12,000**	H	**10,000**	F
GP-14 0-2	12/13/00	10	U	**14**	F	**55**	F
GP-14 2-4	12/13/00	10	U	10	U	25	U
GP-14 20-22	12/13/00	10	U	**30**	Y	**110**	Y
GP-15 0-2	12/13/00	10	U	10	U	**30**	Z
GP-15 2-4	12/13/00	10	U	10	U	**31**	Z
GP-15 20-22	12/13/00	10	U	**78**	F	**160**	Z
GP-16 0-2	12/13/00	10	U	10	U	**49**	F
GP-16 2-4	12/13/00	10	U	10	U	25	U
GP-16 16-18	12/13/00	10	U	**33**	H	**85**	Y
GP-17 0-2	12/13/00	10	U	**13**	H	**84**	F
GP-17 2-4	12/13/00	10	U	10	U	25	U
GP-17 12-14	12/13/00	10	U	**16**	H	**160**	O
GP-18 0-2	12/13/00	10	U	**21**	H	**210**	F
GP-18 2-4	12/13/00	10	U	10	U	25	U
GP-18 16-18	12/13/00	10	U	10	U	**38**	F
GP-19 0-2	12/13/00	10	U	10	U	25	U
GP-19 2-4	12/13/00	10	U	**68**	H	**160**	L
GP-19 16-18	12/13/00	10	U	10	U	25	U
GP-20 2-4	12/13/00	10	U	10	U	25	U
GP-20 16-18	12/13/00	10	U	10	U	25	U
GP-22 10-12	02/09/01	**17**	H	**310**	F	**160**	Y
GP-23 16-18	02/09/01	10	U	**80**	H	**220**	Y
GP-24 12-14	02/09/01	10	U	**74**	H	**130**	Y
GP-24 16-18	02/09/01	10	U	**65**	H	**180**	Y
GP-25 10-12	02/09/01	10	U	**72**	H	**250**	Y
GP-25 14-16	02/09/01	10	U	**65**	H	**160**	Y
GP-26 14-16	02/09/01	10	U	**68**	H	**170**	Y
GP-26 18-20	02/09/01	10	U	10	U	25	U
GP-27 10-12	02/12/01	10	U	10	U	**48**	Y
GP-28 12-14	02/12/01	10	U	10	U	25	U
GP-29 4-6	02/12/01	**710**	H	**18,000**	H	**36,000**	F
GP-30 4-6	02/12/01	500	U	**4,200**	H	**1,700**	F
GP-31 14-16	02/13/01	**6,300**	DH	**35,000**	DH	**38,000**	DF
GP-32 10-12	02/13/01	10	U	10	U	**29**	F
GP-33 16-18	02/13/01	10	U	**130**	H	**280**	Y
GP-34 12-14	02/13/01	10	U	**48**	H	**160**	Y
GP-35 10-12	02/13/01	10	U	**25**	H	**55**	Y
GP-36 12-14	02/13/01	**18**	H	**240**	H	**430**	Y
GP-38 10-12	02/14/01	**47**	H	**930**	Y	**440**	Y
GP-48 10-12	11/14/01	20	U	**1,420**		**1,300**	
GP-49 10-12	11/14/01	20	U	**128**		**171**	
GP-50 10-12	11/14/01	20	U	**265**		**543**	
Catch Basins - Sediment mg/kg (ppm)							
S-1	12/15/00	**26**	Y	**400**	H	**1,900**	O
S-2	12/15/00	**21**	Y	**300**	H	**2,200**	DO
S-3	12/15/00	**580**	Y	**2,400**	H	**7,600**	DO
S3-01C	12/15/00	10	U	10	U	**30**	Y

Notes:
Bold values indicate detected at or above method reporting limit.
U = Not detected at method reporting limit.
F = Fingerprint of the sample matches elution pattern of calibration standard
L = Elution pattern indicates the presence of lighter weight constituents.
H = Elution pattern indicates the presence of heavier weight constituents.
O = The fingerprint resembles oil, but does not match the calibration standard.
Y = Fingerprint resembles a petroleum product, but elution pattern does not match the calibration standard.
Z = Fingerprint does not resemble a petroleum product.
D = The reported result is from a dilution.
Shaded concentration indicates exceedance of Risk Based Concentration.

TABLE 10
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

	DEQ Screening Levels																										
	Occupational Worker	Construction Worker	Excavation Worker	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	GP-4 10-12 Soil 12/11/00		GP-7 2-4 Soil 12/14/00		GP-9 10-12 Soil 12/12/00		GP-14 0-2 Soil 12/13/00		GP-14 2-4 Soil 12/13/00		GP-14 20-22 Soil 12/13/00		GP-15 0-2 Soil 12/13/00		GP-15 2-4 Soil 12/13/00		GP-15 20-22 Soil 12/13/00		GP-16 0-2 Soil 12/13/00		GP-16 2-4 Soil 12/13/00	
Low Molecular Weight PAHs																											
Naphthalene	770,000	710,000	2.0E+07	> Sat	> Sat	110	U	40	JD	70	JD	7.5	U	7.4	U	25		1	J	7.9	U	150		1	J	7.9	U
Acenaphthylene	n/a	n/a	n/a	n/a	n/a	110	U	83	U	160	U	0.7	J	0.5	J	6	J	0.5	J	7.9	U	40		7.6	U	7.9	U
Acenaphthene	4.1E+07	1.6E+07	> Max	> Sat	> Sat	110	U	70	JD	80	JD	7.5	U	7.4	U	9.4	U	7.6	U	7.9	U	84		7.6	U	7.9	U
Fluorene	3.5E+07	1.2E+07	> Max	> Sat	> Sat	110	U	89	D	280	D	7.5	U	0.6	J	3	J	0.8	J	7.9	U	240		7.6	U	7.9	U
Phenanthrene	n/a	n/a	n/a	n/a	n/a	140	D	520	D	1800	D	7.5	U	7.4	U	55		13		7.9	U	1300	D	3	J	7.9	U
Anthracene	> Max	9.0E+07	> Max	> Sat	> Sat	10	JD	140	D	210	D	0.9	J	0.7	J	8	J	2	J	7.9	U	65		7.6	U	7.9	U
2-Methylnaphthalene	n/a	n/a	n/a	n/a	n/a	110	U	380	D	420	D	0.6	J	0.5	J	9.9		1	J	7.9	U	64		1	J	0.8	J
Total LPAH						150		1239		2860		2.2		2.3		106.9		18.3				1943		5		0.8	
High Molecular Weight PAHs																											
Fluoranthene	2.9E+07	8.9E+06	> Max	> Sat	> Sat	70	JD	83	U	310	D	6	J	2	J	94		34		7.9	U	330		8	J	1	J
Pyrene	2.1E+07	6.7E+06	> Max	> Sat	> Sat	160	D	83	U	1200	D	7	J	2	J	130		29		0.7	J	390		7	J	1	J
Benz(a)anthracene	2,700	21,000	590,000	> Sat	> Sat	80	JD	240	D	330	D	4	J	1	J	40		17		7.9	U	110		5	J	0.9	J
Chrysene	270,000	2.1E+06	5.9E+07	> Sat	> Sat	100	JD	740	D	1300	D	7	J	1	J	63		28		0.7	J	130		7	J	1	J
Benzo(b)fluoranthene	2,700	21,000	590,000	> Sat	> Sat	50	JD	83	U	160	U	5	J	1	J	56		25		0.7	J	96		6	J	1	J
Benzo(k)fluoranthene	27,000	210,000	5.9E+06	> Sat	> Sat	40	JD	83	U	160	U	5	J	1	J	46		22		0.9	J	97		6	J	2	J
Benzo(a)pyrene	270	2,100	59,000	> Sat	> Sat	80	JD	70	JD	210	D	6	J	0.8	J	76		24		0.7	J	160		5	J	1	J
Indeno(1,2,3-cd)pyrene	2,700	21,000	590,000	> Sat	> Sat	60	JD	30	JD	60	JD	6	J	1	J	89		24		1	J	130		7	J	2	J
Dibenz(a,h)anthracene	270	2,100	59,000	> Sat	> Sat	20	JD	20	JD	20	JD	1	J	15	U	10	J	5	J	0.7	J	20	J	1	J	16	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	n/a	n/a	70	JD	60	JD	100	JD	8	J	2	J	100		23		1	J	140		8	J	2	J
Total HPAHs						730		1160		3530		55		42		704		231		6		1603		60		12	
Miscellaneous Semivolatile Organics (1)																											
3- and 4-Methylphenol	3.1E+06					2200	U	1700	U	3300	U	150	U	150	U	190	U	150	U	160	U	60	J	150	U	160	U
Dibenzofuran	3.1E+06					110	U	20	JD	80	JD	0.6	J	0.7	J	2.0	J	0.8	J	7.9	U	47		7.6	U	7.9	U
Butyl Benzyl Phthalate	1.0E+08					220	U	170	U	930	D	15	U	15	U	19	U	4	J	16	U	26	U	0.7	J	16	U
Di-n-octyl Phthalate	2.5E+07					2200	U	1700	U	3300	U	150	U	150	U	190	U	150	U	160	U	260	U	150	U	160	U

Notes:
Screening levels based on DEQ, 2003, *Guidance for Remediation of Petroleum-Contaminated Sites,* except as noted.
(1) Screening levels for miscellaneous SVOCs from EPA Region 9 Industrial Preliminary Remediation Goals (PRGs)
(2) Catch basin sediments compared to excavation worker only.
> Sat = Screening level greater than product saturation value; > Max = Screening level greater than maximum possible concentration
n/a = No screening level available for this compound and pathway
Shaded cells indicate exceedance of one or more screening levels
U = not detected at or above the indicated method reporting limit.
J = estimated concentration. D = reported result is from a dilution.

TABLE 10
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

	DEQ Screening Levels																										
	Occupational Worker	Construction Worker	Excavation Worker	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	GP-16 16-18 Soil 12/13/00		GP-17 0-2 Soil 12/13/00		GP-17 2-4 Soil 12/13/00		GP-17 12-14 Soil 12/13/00		GP-18 0-2 Soil 12/14/00		GP-18 2-4 Soil 12/14/00		GP-18 16-18 Soil 12/14/00		GP-19 0-2 Soil 12/14/00		GP-19 2-4 Soil 12/14/00		GP-19 16-18 Soil 12/14/00		GP-20 2-4 Soil 12/14/00	
Low Molecular Weight PAHs																											
Naphthalene	770,000	710,000	2.0E+07	> Sat	> Sat	**27**		7.4	U	7.5	U	**26**		7.6	U	7.6	U	7.3	U	7.3	U	**6**	J	**2**	J	**2**	J
Acenaphthylene	n/a	n/a	n/a	n/a	n/a	**5**	J	7.4	U	**0.6**	J	**7.0**	J	7.6	U	7.6	U	**0.5**	J	7.3	U	**0.8**	J	**0.8**	J	**0.4**	J
Acenaphthene	4.1E+07	1.6E+07	> Max	> Sat	> Sat	**7**	J	7.4	U	7.5	U	8.7	U	7.6	U	7.6	U	7.3	U	7.3	U	7.4	U	7.1	U	7.5	U
Fluorene	3.5E+07	1.2E+07	> Max	> Sat	> Sat	**4**	J	7.4	U	7.5	U	**4**	J	7.6	U	7.6	U	**0.6**	J	7.3	U	**0.9**	J	**0.7**	J	7.5	U
Phenanthrene	n/a	n/a	n/a	n/a	n/a	**36**		7.4	U	7.5	U	**37**		7.6	U	7.6	U	**4**	J	7.3	U	**4**	J	7.1	U	**4**	J
Anthracene	> Max	9.0E+07	> Max	> Sat	> Sat	**8**	J	7.4	U	**0.6**	J	**6**	J	7.6	U	7.6	U	**1**	J	7.3	U	**1**	J	**0.7**	J	**1**	J
2-Methylnaphthalene	n/a	n/a	n/a	n/a	n/a	**8**	J	7.4	U	**2**	J	**6**	J	**0.5**	J	7.6	U	**0.6**	J	7.3	U	**1**	J	**0.7**	J	**0.8**	J
Total LPAH						**95**				**3.2**		**86**		**0.5**				**6.7**				**13.7**		**4.9**		**8.2**	
High Molecular Weight PAHs																											
Fluoranthene	2.9E+07	8.9E+06	> Max	> Sat	> Sat	**30**		**5**	J	**7**	J	**63**		**6**	J	**2**	J	**9.4**		**2**	J	**4**	J	**0.9**	J	**6**	J
Pyrene	2.1E+07	6.7E+06	> Max	> Sat	> Sat	**89**		**4**	J	**8.8**		**68**		**6**	J	**2**	J	**11**		**2**	J	**5**	J	**2**	J	**7**	J
Benz(a)anthracene	2,700	21,000	590,000	> Sat	> Sat	**38**		**3**	J	**4**	J	**29**		**3**	J	**1**	J	**6**	J	**2**	J	**3**	J	**0.5**	J	**3**	J
Chrysene	270,000	2.1E+06	5.9E+07	> Sat	> Sat	**48**		**5**	J	**7**	J	**36**		**6**	J	**2**	J	**11**		**2**	J	**4**	J	**0.6**	J	**5**	J
Benzo(b)fluoranthene	2,700	21,000	590,000	> Sat	> Sat	**30**		**4**	J	**4**	J	**28**		**5**	J	**1**	J	**8.4**		**2**	J	**4**	J	7.1	U	**3**	J
Benzo(k)fluoranthene	27,000	210,000	5.9E+06	> Sat	> Sat	**33**		**3**	J	**5**	J	**31**		**4**	J	**2**	J	**5**	J	**2**	J	**4**	J	**0.7**	J	**4**	J
Benzo(a)pyrene	270	2,100	59,000	> Sat	> Sat	**44**		**4**	J	**5**	J	**37**		**4**	J	**1**	J	**6**	J	**2**	J	**5**	J	**0.6**	J	**4**	J
Indeno(1,2,3-cd)pyrene	2,700	21,000	590,000	> Sat	> Sat	**28**		**5**	J	**5**	J	**28**		**5**	J	**1**	J	**6**	J	**2**	J	**7**	J	**0.8**	J	**3**	J
Dibenz(a,h)anthracene	270	2,100	59,000	> Sat	> Sat	**4**	J	**1**	J	**0.8**	J	**5**	J	**1**	J	15	U	**2**	J	**1**	J	**1**	J	**0.7**	J	**0.9**	J
Benzo(g,h,i)perylene	n/a	n/a	n/a	n/a	n/a	**33**		**6**	J	**6**	J	**27**		**5**	J	**1**	J	**7**	J	**2**	J	**7**	J	**0.9**	J	**4**	J
Total HPAHs						**377**		**40**		**53**		**352**		**45**		**13**		**71.8**		**19**		**44**		**7.7**		**40**	
Miscellaneous Semivolatile Organics (1)																											
3- and 4-Methylphenol	3.1E+06					180	U	150	U	150	U	170	U	150	U	150	U	150	U	150	U	150	U	140	U	150	U
Dibenzofuran	3.1E+06					**2**	J	7.4	U	7.5	U	**2**	J	7.6	U	7.6	U	**0.5**	J	7.3	U	**1**	J	**0.9**	J	**0.5**	J
Butyl Benzyl Phthalate	1.0E+08					18	U	**1**	J	15	U	17	U	**1**	J	15	U	**3**	J	**1**	J	15	U	14	U	15	U
Di-n-octyl Phthalate	2.5E+07					180	U	150	U	150	U	**2**	J	150	U	150	U	**5**	J	**0.8**	J	150	U	140	U	150	U

Notes:

Screening levels based on DEQ, 2003, *Guidance for Remediation of Petroleum-Contaminated Site*

(1) Screening levels for miscellaneous SVOCs from EPA Region 9 Industrial Preliminary Remedi

(2) Catch basin sediments compared to excavation worker only.

> Sat = Screening level greater than product saturation value; > Max = Screening level greater tha

n/a = No screening level available for this compound and pathway

Shaded cells indicate exceedance of one or more screening levels

U = not detected at or above the indicated method reporting limit.

J = estimated concentration. D = reported result is from a dilution.

TABLE 10
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

	DEQ Screening Levels					GP-20 16-18 Soil 12/14/00		GP-22 10-12 Soil 02/09/01		GP-23 16-18 Soil 02/09/01		GP-24 12-14 Soil 02/09/01		GP-24 16-18 Soil 02/09/01		GP-25 10-12 Soil 02/09/01		GP-25 14-16 Soil 02/09/01		GP-26 14-16 Soil 02/09/01		GP-26 18-20 Soil 02/09/01		GP-27 10-12 Soil 02/12/01		GP-28 12-14 Soil 02/12/01	
	Occupational Worker	Construction Worker	Excavation Worker	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air																						
Low Molecular Weight PAHs																											
Naphthalene	770,000	710,000	2.0E+07	> Sat	> Sat	7.1	U	**47**		**32**		**36**		**18**		**67**		**100**		**61**		**15**		**8**		7.2	U
Acenaphthylene	n/a	n/a	n/a	n/a	n/a	7.1	U	**5**	J	**10**		**5**	J	**3**	J	**17**		**15**		**8**	J	**1**	J	**0.9**	J	7.2	U
Acenaphthene	4.1E+07	1.6E+07	> Max	> Sat	> Sat	7.1	U	**27**		**9**	J	**8**	J	**22**		**15**		**25**		**17**		8.4	U	7.6	U	7.2	U
Fluorene	3.5E+07	1.2E+07	> Max	> Sat	> Sat	7.1	U	**82**		**8**	J	**8**	J	**6**	J	**18**		**21**		**14**		**2**	J	**1**	J	7.2	U
Phenanthrene	n/a	n/a	n/a	n/a	n/a	7.1	U	**180**		**66**		**47**		**37**		**110**		**150**		**83**		**11**		**7**		7.2	U
Anthracene	> Max	9.0E+07	> Max	> Sat	> Sat	7.1	U	**11**		**16**		**10**		**7**	J	**28**		**30**		**19**		**2**	J	**2**	J	7.2	U
2-Methylnaphthalene	n/a	n/a	n/a	n/a	n/a	7.1	U	**160**		**13**		**19**		**4**	J	**30**		**38**		**24**		**5**	J	**2**	J	7.2	U
Total LPAH								**512**		**154**		**133**		**97**		**285**		**379**		**226**		**36**		**21**			
High Molecular Weight PAHs																											
Fluoranthene	2.9E+07	8.9E+06	> Max	> Sat	> Sat	**2**	J	**49**		**120**		**54**		**34**		**160**		**160**		**86**		**12**		**6**	J	7.2	U
Pyrene	2.1E+07	6.7E+06	> Max	> Sat	> Sat	**4**	J	**63**		**150**		**70**		**54**		**190**		**190**		**120**		**15**		**10**		7.2	U
Benz(a)anthracene	2,700	21,000	590,000	> Sat	> Sat	**2**	J	**18**		**30**		**15**		**13**		**58**		**57**		**44**		**5**	J	**4**	J	7.2	U
Chrysene	270,000	2.1E+06	5.9E+07	> Sat	> Sat	**3**	J	**24**		**39**		**19**		**18**		**71**		**69**		**52**		**7**	J	**4**	J	7.2	U
Benzo(b)fluoranthene	2,700	21,000	590,000	> Sat	> Sat	**1**	J	**19**		**28**		**13**		**9.5**		**50**		**40**		**33**		**5**	J	**4**	J	7.2	U
Benzo(k)fluoranthene	27,000	210,000	5.9E+06	> Sat	> Sat	**1**	J	**15**		**27**		**12**		**11**		**40**		**38**		**31**		**4**	J	**4**	J	7.2	U
Benzo(a)pyrene	270	2,100	59,000	> Sat	> Sat	**2**	J	**21**		**38**		**17**		**15**		**66**		**59**		**46**		**6**	J	**5**	J	7.2	U
Indeno(1,2,3-cd)pyrene	2,700	21,000	590,000	> Sat	> Sat	**1**	J	**25**		**27**		**12**		**11**		**72**		**56**		**45**		**7**	J	**6**	J	**1**	J
Dibenz(a,h)anthracene	270	2,100	59,000	> Sat	> Sat	14	U	**4**	J	**5**	J	**3**	J	**2**	J	**9**	J	**9**	J	**8**	J	**1**	J	**1**	J	7.2	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	n/a	n/a	**3**	J	**23**		**32**		**14**		**12**		**61**		**48**		**36**		**6**	J	**5**	J	7.2	U
Total HPAHs						**19**		**261**		**496**		**229**		**180**		**777**		**726**		**501**		**68**		**49**		**1**	
Miscellaneous Semivolatile Organics (1)																											
3- and 4-Methylphenol	3.1E+06					140	U	96	U	**60**	J	**110**		90	U	**50**	J	**160**		**180**		84	U	76	U	72	U
Dibenzofuran	3.1E+06					7.1	U	**32**		**6**	J	**4**	J	**2**	J	**11**		**11**		**9**	J	**2**	J	**0.8**	J	7.2	U
Butyl Benzyl Phthalate	1.0E+08					14	U	9.6	U	10.0	U	9.9	U	9.0	U	9.9	U	9.8	U	9.9	U	8.4	U	**2**	J	7.2	U
Di-n-octyl Phthalate	2.5E+07					140	U	9.6	U	10.0	U	9.9	U	9.0	U	9.9	U	9.8	U	9.9	U	8.4	U	7.6	U	7.2	U

Notes:

Screening levels based on DEQ, 2003, *Guidance for Remediation of Petroleum-Contaminated Sit*

(1) Screening levels for miscellaneous SVOCs from EPA Region 9 Industrial Preliminary Remedi

(2) Catch basin sediments compared to excavation worker only.

> Sat = Screening level greater than product saturation value; > Max = Screening level greater tha

n/a = No screening level available for this compound and pathway

Shaded cells indicate exceedance of one or more screening levels.

U = not detected at or above the indicated method reporting limit.

J = estimated concentration. D = reported result is from a dilution.

TABLE 10
PAHs and SVOCs (µg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

	DEQ Screening Levels																						
	Occupational Worker	Construction Worker	Excavation Worker	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	GP-29 4-6 Soil 02/12/01		GP-30 4-6 Soil 02/12/01		GP-31 14-16 Soil 02/13/01		GP-32 10-12 Soil 02/13/01		GP-33 16-18 Soil 02/13/01		GP-34 12-14 Soil 02/13/01		GP-35 10-12 Soil 02/13/01		GP-36 12-14 Soil 02/13/01		GP-38 10-12 Soil 02/14/01	
Low Molecular Weight PAHs																							
Naphthalene	770,000	710,000	2.0E+07	> Sat	> Sat	870	D	150	U	4300	D	7.1	U	12		56		4	J	54		800	D
Acenaphthylene	n/a	n/a	n/a	n/a	n/a	380	U	150	U	1500	U	7.1	U	3	J	9.8		4	J	9	J	83	
Acenaphthene	4.1E+07	1.6E+07	> Max	> Sat	> Sat	1000	D	150	U	5500	D	7.1	U	8	U	10		7.7	U	9.4		200	
Fluorene	3.5E+07	1.2E+07	> Max	> Sat	> Sat	1500	D	10	JD	12000	D	0.5	J	4	J	13		3	J	10		130	
Phenanthrene	n/a	n/a	n/a	n/a	n/a	3900	D	40	JD	37000	D	6	J	22		79		20		67		590	D
Anthracene	> Max	9.0E+07	> Max	> Sat	> Sat	1100	D	20	JD	6300	D	7.1	U	5	J	17		4	J	13		110	
2-Methylnaphthalene	n/a	n/a	n/a	n/a	n/a	13000	D	20	JD	190000	D	2	J	5	J	21		3	J	19		200	
Total LPAH						21370		90		255100		9		51		206		38		181		2113	
High Molecular Weight PAHs																							
Fluoranthene	2.9E+07	8.9E+06	> Max	> Sat	> Sat	1100	D	20	JD	2400	D	4	J	24		93		30		70		540	D
Pyrene	2.1E+07	6.7E+06	> Max	> Sat	> Sat	6800	D	80	JD	16000	D	5	J	34		120		38		95		650	D
Benz(a)anthracene	2,700	21,000	590,000	> Sat	> Sat	1100	D	150	U	4200	D	2	J	8.5		29		10		29		120	
Chrysene	270,000	2.1E+06	5.9E+07	> Sat	> Sat	2600	D	100	JD	14000	D	6	J	13		41		13		37		150	
Benzo(b)fluoranthene	2,700	21,000	590,000	> Sat	> Sat	400	D	40	JD	1000	JD	3	J	9		31		12		25		94	
Benzo(k)fluoranthene	27,000	210,000	5.9E+06	> Sat	> Sat	200	JD	10	JD	600	JD	2	J	8.4		24		12		25		87	
Benzo(a)pyrene	270	2,100	59,000	> Sat	> Sat	730	D	70	JD	2600	D	2	J	11		34		19		34		130	
Indeno(1,2,3-cd)pyrene	2,700	21,000	590,000	> Sat	> Sat	200	JD	40	JD	500	JD	2	J	7	J	23		14		25		78	
Dibenz(a,h)anthracene	270	2,100	59,000	> Sat	> Sat	100	JD	30	JD	400	JD	0.7	J	2	J	4	J	2	J	4	J	12	
Benzo(g,h,i)perylene	n/a	n/a	n/a	n/a	n/a	400	JD	60	JD	1000	JD	2	J	7	J	26		15		25		73	
Total HPAHs						13630		450		42700		29		124		425		165		369		1934	
Miscellaneous Semivolatile Organics (1)																							
3- and 4-Methylphenol	3.1E+06					3800	U	1500	U	15000	U	71	U	80	U	95	U	77	U	80	J	1000	D
Dibenzofuran	3.1E+06					380	U	6	JD	3000	D	7.1	U	2	J	8	J	0.8	J	6	J	45	
Butyl Benzyl Phthalate	1.0E+08					380	U	150	U	1500	U	7.1	U	8.0	U	9.5	U	0.7	J	9.4	U	8.4	U
Di-n-octyl Phthalate	2.5E+07					380	U	150	U	1500	U	7.1	U	8.0	U	9.5	U	7.7	U	9.4	U	8.4	U

Notes:
Screening levels based on DEQ, 2003, *Guidance for Remediation of Petroleum-Contaminated Sit*
(1) Screening levels for miscellaneous SVOCs from EPA Region 9 Industrial Preliminary Remedi
(2) Catch basin sediments compared to excavation worker only.
> Sat = Screening level greater than product saturation value; > Max = Screening level greater tha
n/a = No screening level available for this compound and pathway
Shaded cells indicate exceedance of one or more screening levels
U = not detected at or above the indicated method reporting limit.
J = estimated concentration. D = reported result is from a dilution.

TABLE 10
PAHs and SVOCs (μg/kg)
Upland Soil and Catch Basin Sediment
McCall/GWCC

	DEQ Screening Levels												
	Occupational Worker	Construction Worker	Excavation Worker	Volatilization, Outdoor Air	Vapor Intrusion, Indoor Air	S-1 Sediment 12/15/00		S-2 Sediment 12/15/00		S-3 Sediment 12/15/00		S3-01C Sediment 12/15/00	
Low Molecular Weight PAHs													
Naphthalene	770,000	710,000	2.0E+07	> Sat	> Sat	**200**	JD	**50**	JD	**400**	JD	12	U
Acenaphthylene	n/a	n/a	n/a	n/a	n/a	**40**	JD	**20**	JD	**60**	JD	12	U
Acenaphthene	4.1E+07	1.6E+07	> Max	> Sat	> Sat	**200**	JD	**30**	JD	720	U	12	U
Fluorene	3.5E+07	1.2E+07	> Max	> Sat	> Sat	**100**	JD	**20**	JD	**3600**	D	12	U
Phenanthrene	n/a	n/a	n/a	n/a	n/a	**1500**	D	**320**	D	**3600**	D	12	U
Anthracene	> Max	9.0E+07	> Max	> Sat	> Sat	**400**	JD	**50**	JD	**2600**	D	12	U
2-Methylnaphthalene	n/a	n/a	n/a	n/a	n/a	**100**	JD	**50**	JD	**400**	JD	**0.6**	J
Total LPAH						**2540**		**540**		**10660**		**0.6**	
High Molecular Weight PAHs													
Fluoranthene	2.9E+07	8.9E+06	> Max	> Sat	> Sat	**2600**	D	**690**	D	**5800**	D	**3**	J
Pyrene	2.1E+07	6.7E+06	> Max	> Sat	> Sat	**2600**	D	**770**	D	**5500**	D	**3**	J
Benz(a)anthracene	2,700	21,000	590,000	> Sat	> Sat	**1300**	D	**440**	D	**2500**	D	**2**	J
Chrysene	270,000	2.1E+06	5.9E+07	> Sat	> Sat	**2000**	D	**740**	D	**5300**	D	**3**	J
Benzo(b)fluoranthene	2,700	21,000	590,000	> Sat	> Sat	**2000**	D	**780**	D	**4100**	D	**3**	J
Benzo(k)fluoranthene	27,000	210,000	5.9E+06	> Sat	> Sat	**1500**	D	**540**	D	**3400**	D	**2**	J
Benzo(a)pyrene	270	2,100	59,000	> Sat	> Sat	**1900**	D	**670**	D	**3700**	D	**2**	J
Indeno(1,2,3-cd)pyrene	2,700	21,000	590,000	> Sat	> Sat	**1500**	D	**490**	D	**3200**	D	**2**	J
Dibenz(a,h)anthracene	270	2,100	59,000	> Sat	> Sat	**300**	JD	**100**	JD	**800**	JD	24	U
Benzo(g,h,i)perylene	n/a	n/a	n/a	n/a	n/a	**1600**	D	**500**	D	**3600**	D	**3**	J
Total HPAHs						**17300**		**5720**		**37900**		**23**	
Miscellaneous Semivolatile Organics (1)													
3- and 4-Methylphenol	3.1E+06					13000	U	1900	U	**4000**	JD	240	U
Dibenzofuran	3.1E+06					**100**	JD	**20**	JD	**200**	JD	12	U
Butyl Benzyl Phthalate	1.0E+08					**1500**	D	**2500**	D	**5000**	D	**1**	J
Di-n-octyl Phthalate	2.5E+07					13000	U	1900	U	14000	U	**2**	J

Notes:

Screening levels based on DEQ, 2003, *Guidance for Remediation of Petroleum-Contaminated Site*

(1) Screening levels for miscellaneous SVOCs from EPA Region 9 Industrial Preliminary Remedi

(2) Catch basin sediments compared to excavation worker only.

> Sat = Screening level greater than product saturation value; > Max = Screening level greater tha

n/a = No screening level available for this compound and pathway

Shaded cells indicate exceedance of one or more screening levels

U = not detected at or above the indicated method reporting limit.

J = estimated concentration. D = reported result is from a dilution.

TABLE 11
VOLATILE ORGANIC COMPOUNDS (µg/kg)
UPLAND SOIL
McCall/GWCC

DEQ (2003) Screening Levels		Acetone	2-Butanone	cis-1, 2-dichloroethene	Tetrachloroethene	Chlorobenzene	o-Xylene	Isopropylbenzene	n-Propylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	n-Butylbenzene
Occupational Worker		6,000,000	27,000,000	> Sat	5,100	530,000	> Sat	> Sat	> Sat	> Sat	> Sat	220,000	--	240,000
Construction Worker		--	--	> Sat	40,000	--	> Sat	> Sat	> Sat	> Sat	> Sat	--	--	--
Excavation Worker		--	--	> Sat	> Sat	--	> Max	> Max	> Max	> Sat	> Sat	--	--	--
Vapor Intrusion (Indoor Air)		--	--	110,000	1,500	--	> Sat	> Sat	> Sat	140,000	840,000	--	--	--
Volatilization (Outdoor Air)		--	--	> Sat	62,000	--	> Sat	> Sat	> Sat	> Sat	790,000	--	--	--
Sample ID	**Date**													
GP-4 10-12	12/11/00	64 U	26 U	6.4 U	6.4 U	6.4 U	6.4 U	26 U	26 U	26 U	26 U	26 U	26 U	26 U
GP-7 2-4	12/14/00	**87**	22 U	5.6 U	5.6 U	**9.5**	5.6 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U
GP-9 10-12	12/12/00	**410**	**100**	**5.7**	5.5 U	5.5 U	5.5 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U
GP-15 20-22	12/14/00	**100**	28 U	6.9 U	6.9 U	6.9 U	6.9 U	28 U	28 U	28 U	28 U	28 U	28 U	28 U
GP-17 12-14	12/13/00	57 U	23 U	5.7 U	5.7 U	**8.6**	5.7 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
GP-22 10-12	02/09/01	**93**	29 U	7.2 U	7.2 U	7.2 U	7.2 U	**80**	29 U	29 U	29 U	**170**	29 U	**35**
GP-23 16-18	02/09/01	75 U	30 U	7.5 U	7.5 U	7.5 U	7.5 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
GP-24 12-14	02/09/01	73 U	29 U	7.3 U	7.3 U	7.3 U	7.3 U	29 U	29 U	29 U	29 U	29 U	29 U	29 U
GP-24 16-18	02/09/01	67 U	27 U	6.7 U	6.7 U	6.7 U	6.7 U	27 U	27 U	27 U	27 U	27 U	27 U	27 U
GP-25 10-12	02/09/01	74 U	30 U	7.4 U	7.4 U	7.4 U	7.4 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
GP-25 14-16	02/09/01	**92**	29 U	7.4 U	7.4 U	7.4 U	7.4 U	29 U	29 U	29 U	29 U	29 U	29 U	29 U
GP-26 14-16	02/09/01	73 U	29 U	7.3 U	7.3 U	7.3 U	7.3 U	29 U	29 U	29 U	29 U	29 U	29 U	29 U
GP-26 18-20	02/09/01	63 U	25 U	6.3 U	6.3 U	6.3 U	6.3 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
GP-27 10-12	02/12/01	56 U	23 U	5.6 U	5.6 U	5.6 U	5.6 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
GP-28 12-14	02/12/01	54 U	21 U	5.4 U	5.4 U	5.4 U	5.4 U	21 U	21 U	21 U	21 U	21 U	21 U	21 U
GP-29 4-6	02/12/01	11 U	11 U	0.28 U	0.28 U	0.28 U	0.28 U	1.1 U	1.1 U	**2.4**	**5.1**	1.1 U	**1.4**	1.1 U
GP-30 4-6	02/12/01	57 U	23 U	5.7 U	**19**	5.7 U	5.7 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
GP-31 14-16	02/13/01	11 U	11 U	0.29 U	0.29 U	0.29 U	**0.85**	1.1 U	**2.0**	1.1 U	**1.4**	**1.4**	1.1 U	**3**
GP-32 10-12	02/13/01	53 U	21 U	5.3 U	5.3 U	5.3 U	5.3 U	21 U	21 U	21 U	21 U	21 U	21 U	21 U
GP-33 16-18	02/13/01	60 U	24 U	6.0 U	6.0 U	6.0 U	6.0 U	24 U	24 U	24 U	24 U	24 U	24 U	24 U
GP-34 12-14	02/13/01	71 U	28 U	7.1 U	7.1 U	7.1 U	7.1 U	28 U	28 U	28 U	28 U	28 U	28 U	28 U
GP-35 10-12	02/13/01	58 U	23 U	5.8 U	5.8 U	5.8 U	5.8 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
GP-36 12-14	02/13/01	**75**	28 U	7.0 U	7.0 U	7.0 U	7.0 U	28 U	28 U	28 U	28 U	28 U	28 U	28 U
GP-38 10-12	12/13/00	**110**	25 U	6.2 U	6.2 U	6.2 U	6.2 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U

Notes:
U = Not detected at indicated detection limit; J = Estimated concentration
Naphthalene reported and evaluated with other PAHs in semivolatile fraction
Bold value = Detected concentration; Only those VOCs with detected concentrations are presented
Screening levels from DEQ *Risk-Based Guidance for Petroleum-Contaminated Sites* and EPA Region 9 Preliminary Remediation Goals (PRGs)
> Sat = screening level exceeds soil saturation with free product; > Max = screening level is impossibly large (e.g., no toxicity possible)

Table 12
Metals
Upland Soil and Catch Basin Sediment
McCall/GWCC
Portland, Oregon

Location		Matrix	Date Sampled	Arsenic	Cadmium	Chromium	Copper	Lead	Zinc
Regional Background				7	1	42	36	17	86
Screening Level (Ind. PRG)				1.6	450	450	41,000	750	100,000
Geoprobe Borings - Soil mg/kg (ppm)									
GP-4 10-12	Total	Soil	12/11/00	3.3		11.6	15.7		
GP-7 2-4	Total	Soil	12/14/00	2.9		13.3	16.8		
GP-9 10-12	Total	Soil	12/12/00	2.4		14.2	19.3		
GP-14 0-2	Total	Soil	12/14/00	2.2		13.1	17.4		
GP-14 2-4	Total	Soil	12/14/00	1.7		12.3	13.4		
GP-14 20-22	Total	Soil	12/14/00	4.6		14.5	19.0		
GP-15 0-2	Total	Soil	12/14/00	1.7		11.1	18.1		
GP-15 2-4	Total	Soil	12/14/00	1.8		12.7	14.7		
GP-15 20-22	Total	Soil	12/14/00	3.1		22.8	27.1		
GP-16 0-2	Total	Soil	12/14/00	1.6		10.9	15.4		
GP-16 2-4	Total	Soil	12/14/00	1.8		14.0	15.4		
GP-16 16-18	Total	Soil	12/14/00	3.2		12.9	20.7		
GP-17 0-2	Total	Soil	12/14/00	1.5		9.96	13.4		
GP-17 2-4	Total	Soil	12/14/00	1.8		11.9	14.6		
GP-17 12-14	Total	Soil	12/13/00	2.2		16.6	18.7		
GP-18 0-2	Total	Soil	12/14/00	1.3		8.88	13.7		
GP-18 2-4	Total	Soil	12/14/00	1.6		11.1	13.5		
GP-18 16-18	Total	Soil	12/14/00	2.5		12.6	16.9		
GP-19 0-2	Total	Soil	12/14/00	1.6		10.1	12.3		
GP-19 2-4	Total	Soil	12/14/00	1.9		12.9	15.0		
GP-19 16-18	Total	Soil	12/14/00	1.6		10.6	13.2		
GP-20 2-4	Total	Soil	12/14/00	1.6		11.1	14.2		
GP-20 16-18	Total	Soil	12/13/00	1.6		9.11	11.6		
Catch Basins - Sediment mg/kg (ppm)									
S-1	Total	Sediment	12/15/00	5.2	2.00	48.9	137	145	638
S-2	Total	Sediment	12/15/00	7.5	1.42	63.7	316	211	584
S-3	Total	Sediment	12/15/00	37.9	2.86	144	1050	454	985
S3-01C	Total	Sediment	12/15/00	4.4	0.12	11.9	27.4	8.58	82.7

Notes:

Background arsenic value from Ecology, 1994; Industrial direct contact values from EPA, 2002 (Region 9 PRGs).

TABLE 13
Shoreline Groundwater Comparison with Surface Water Screening Criteria (µg/L)
McCall Oil and Chemical

	DEQ Screening Levels																					
	DEQ (2001) Level II SLV	Reference	Updated Level II SLV	Reference	EX-2 12/20/00		EX-2 03/07/02		EX-2 10/04/02		EX-2 02/12/04		EX-3 12/20/00		EX-3 03/07/02		EX-3 10/04/02		EX-3 02/12/04			
Low Molecular Weight PAHs																						
Naphthalene	620	a,c	194	e	**0.01**	J	0.013	U	**0.022**	J	**0.023**	J	**0.02**	J	0.013	U	**0.038**	J	0.012	U		
Acenaphthylene			307	e	0.006	U	0.011	U	0.011	U	0.011	U	0.006	U	0.011	U	0.011	U	0.011	U		
Acenaphthene	520	a,c	56	e	**0.02**	J	**0.041**	J	**0.110**	J	**0.025**	J	**0.01**	J	0.0093	U	**0.023**	J	0.0088	U		
Fluorene	3.9	a,d	39	e	0.006	U	0.013	U	0.012	U	0.012	U	0.006	U	0.013	U	0.012	U	0.012	U		
Phenanthrene	6.3	a,d	19	e	**0.04**	J	**0.047**	J	**0.057**	J	**0.039**	J	**0.04**	J	**0.06**	J	**0.06**	J	**0.028**	J		
Anthracene			21	e	0.006	U	0.016	U	0.015	U	0.015	U	0.006	U	**0.019**	J	**0.016**	J	0.015	U		
2-Methylnaphthalene			72	e	**0.008**	J	**0.012**	J	**0.017**	J	**0.013**	J	0.008	U	0.012	U	**0.015**	J	0.012	U		
High Molecular Weight PAHs																						
Fluoranthene	6.2	a,d	7.1	e	**0.009**	J	**0.017**	J	0.013	U	0.013	U	**0.01**	J	**0.038**	J	**0.034**	J	0.013	U		
Pyrene			10	e	**0.03**	J	**0.039**	J	**0.074**	J	**0.036**	J	**0.03**	J	**0.064**	J	**0.061**	J	**0.028**	J		
Benz(a)anthracene	0.14	b,d	2.2	e	**0.007**	J	0.013	U	0.012	U	0.012	U	**0.008**	J	0.013	U	0.012	U	0.012	U		
Chrysene			2.0	e	**0.007**	J	0.015	U	0.014	U	0.014	U	**0.01**	J	0.015	U	0.014	U	0.014	U		
Benzo(b)fluoranthene			0.68	e	**0.006**	J	0.021	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U		
Benzo(k)fluoranthene			0.64	e	**0.006**	J	0.021	U	0.020	U	0.020	U	**0.006**	J	0.021	U	0.020	U	0.020	U		
Benzo(a)pyrene	0.07	b,d	0.96	e	**0.007**	J	0.017	U	0.016	U	0.016	U	**0.007**	J	0.017	U	0.016	U	0.016	U		
Indeno(1,2,3-cd)pyrene			0.28	e	**0.009**	J	0.026	U	0.024	U	0.024	U	**0.009**	J	0.026	U	0.024	U	0.024	U		
Dibenz(a,h)anthracene			0.28	e	**0.005**	J	0.033	U	0.031	U	0.031	U	0.004	U	0.033	U	0.031	U	0.031	U		
Benzo(g,h,i)perylene			0.44	e	**0.01**	J	0.018	U	0.017	U	0.017	U	**0.02**	J	**0.034**	J	**0.025**	J	0.017	U		
Miscellaneous Semivolatiles																						
3- and 4-Methylphenol					**0.02**	J	0.055	U	0.051	U	0.051	U	**0.05**	J	**0.087**	J	**0.090**	J	0.051	U		
Dibenzofuran	19	b,d			0.007	U	0.014	U	0.014	U	0.014	U	0.007	U	0.014	U	0.014	U	0.014	U		
Butyl Benzyl Phthalate	95	b,d			0.02	U	0.028	U	0.026	U	0.026	U	0.02	U	0.028	U	0.026	U	0.026	U		
Di-n-octyl Phthalate	3,500	b,d			0.003	U	0.035	U	0.032	U	0.032	U	0.003	U	0.035	U	0.032	U	0.032	U		
Metals																						
Arsenic - Total					--		--		--		**57**		--		--		--		**87**			
Arsenic - Dissolved	750	b,f			--		--		--		**66**		--		--		--		**86**			
Chromium - Total					--		--		--		--		--		--		--		--			
Chromium - Dissolved	55	b,f			--		--		--		--		--		--		--		--			
Copper - Total					--		--		--		--		--		--		--		--			
Copper - Dissolved	9	a,f			--		--		--		--		--		--		--		--			
Volatile Organic Compounds																						
1,2-Dichloroethylene(cis)	590	a,d			0.5	U	0.5	U	0.5	U	--		0.5	U	0.5	U	0.5	U	--			
Trichloroethylene	21,900	a,c	47	a,d	0.5	U	0.5	U	0.5	U	--		0.5	U	0.5	U	0.5	U	--			
Tetrachloroethylene	840	a,c	98	a,d	0.5	U	0.5	U	0.5	U	--		0.5	U	0.5	U	0.5	U	--			
Vinyl Chloride	6,500	b,d			0.5	U	0.5	U	0.5	U	--		0.5	U	0.5	U	0.5	U	--			

	DEQ (2001) Level II SLV	Reference	Updated Level II SLV	Reference	EX-5 12/20/00		EX-5 03/07/02		EX-5 10/04/02	
Low Molecular Weight PAHs										
Naphthalene	620	a,c	194	e	**0.009**	J	**0.028**	J	**0.022**	J
Acenaphthylene			307	e	0.006	U	0.011	U	0.011	U
Acenaphthene	520	a,c	56	e	**0.009**	J	**0.024**	J	**0.015**	J
Fluorene	3.9	a,d	39	e	0.006	U	0.013	U	0.012	U
Phenanthrene	6.3	a,d	19	e	**0.02**	J	**0.034**	J	**0.039**	J
Anthracene			21	e	0.006	U	0.016	U	**0.017**	J
2-Methylnaphthalene			72	e	0.008	U	0.012	U	0.012	U
High Molecular Weight PAHs										
Fluoranthene	6.2	a,d	7.1	e	**0.009**	J	0.013	U	0.013	U
Pyrene			10	e	**0.040**	J	**0.046**	J	**0.067**	J
Benz(a)anthracene	0.14	b,d	2.2	e	**0.006**	J	0.013	U	0.012	U
Chrysene			2.0	e	**0.008**	J	0.015	U	0.014	U
Benzo(b)fluoranthene			0.68	e	0.005	U	0.021	U	0.020	U
Benzo(k)fluoranthene			0.64	e	**0.003**	J	0.021	U	0.020	U
Benzo(a)pyrene	0.07	b,d	0.96	e	0.006	U	0.017	U	0.016	U
Indeno(1,2,3-cd)pyrene			0.28	e	**0.007**	J	0.026	U	0.024	U
Dibenz(a,h)anthracene			0.28	e	0.004	U	0.033	U	0.031	U
Benzo(g,h,i)perylene			0.44	e	**0.03**	J	**0.054**	J	**0.031**	J
Miscellaneous Semivolatiles										
3- and 4-Methylphenol					**0.007**	J	0.055	U	0.051	U
Dibenzofuran	19	b,d			0.007	U	0.014	U	0.014	U
Butyl Benzyl Phthalate	95	b,d			0.02	U	0.028	U	0.026	U
Di-n-octyl Phthalate	3,500	b,d			0.003	U	0.035	U	0.032	U
Metals										
Arsenic - Total					--		--		--	
Arsenic - Dissolved	750	b,f			--		--		--	
Chromium - Total					--		--		--	
Chromium - Dissolved	55	b,f			--		--		--	
Copper - Total					--		--		--	
Copper - Dissolved	9	a,f			--		--		--	
Volatile Organic Compounds										
1,2-Dichloroethylene(cis)	590	a,d			0.5	U	0.5	U	0.5	U
Trichloroethylene	21,900	a,c	47	a,d	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	840	a,c	98	a,d	0.5	U	0.5	U	0.5	U
Vinyl Chloride	6,500	b,d			0.5	U	0.5	U	0.5	U

	DEQ (2001) Level II SLV	Reference	Updated Level II SLV	Reference	MW-5 12/20/00		MW-5 03/07/02		MW-5 10/03/02		MW-5 Dup 10/03/02		MW-5 02/11/04	
Low Molecular Weight PAHs														
Naphthalene	620	a,c	194	e	0.008	U	**0.034**	J	0.012	U	**0.023**		**0.025**	J
Acenaphthylene			307	e	0.006	U	0.011	U	0.011	U	0.011	U	0.011	U
Acenaphthene	520	a,c	56	e	0.007	U	0.0094	U	0.0088	U	0.0088	U	0.0088	U
Fluorene	3.9	a,d	39	e	0.006	U	0.013	U	0.012	U	0.012	U	0.012	U
Phenanthrene	6.3	a,d	19	e	0.007	U	0.011	U	**0.021**	J	**0.021**	J	0.011	U
Anthracene			21	e	0.006	U	0.016	U	**0.025**	J	**0.022**	J	0.015	U
2-Methylnaphthalene			72	e	0.008	U	0.013	U	0.012	U	0.012	U	0.012	U
High Molecular Weight PAHs														
Fluoranthene	6.2	a,d	7.1	e	0.007	U	0.014	U	**0.031**	J	**0.026**	J	0.013	U
Pyrene			10	e	0.007	U	**0.024**	J	**0.037**	J	**0.034**	J	0.015	U
Benz(a)anthracene	0.14	b,d	2.2	e	0.005	U	0.013	U	**0.030**	J	0.012	U	0.012	U
Chrysene			2.0	e	0.006	U	0.015	U	**0.022**	J	0.014	U	0.014	U
Benzo(b)fluoranthene			0.68	e	0.005	U	0.021	U	0.020	U	0.020	U	0.020	U
Benzo(k)fluoranthene			0.64	e	0.003	U	0.021	U	0.020	U	0.020	U	0.020	U
Benzo(a)pyrene	0.07	b,d	0.96	e	0.006	U	0.018	U	0.016	U	0.016	U	0.016	U
Indeno(1,2,3-cd)pyrene			0.28	e	0.004	U	0.026	U	0.024	U	0.024	U	0.024	U
Dibenz(a,h)anthracene			0.28	e	0.004	U	0.033	U	0.031	U	0.031	U	0.031	U
Benzo(g,h,i)perylene			0.44	e	0.005	U	0.018	U	0.017	U	0.017	U	0.017	U
Miscellaneous Semivolatiles														
3- and 4-Methylphenol					0.003	U	0.055	U	0.051	U	0.051	U	0.051	U
Dibenzofuran	19	b,d			0.007	U	0.015	U	0.200	U	0.014	U	0.014	U
Butyl Benzyl Phthalate	95	b,d			0.02	U	0.028	U	**0.048**	J	0.026	U	0.026	U
Di-n-octyl Phthalate	3,500	b,d			0.003	U	0.035	U	0.014	U	0.014	U	0.032	U
Metals														
Arsenic - Total					--		--		--		--		**16**	
Arsenic - Dissolved	750	b,f			--		--		--		--		**15**	
Chromium - Total					--		--		--		--		--	
Chromium - Dissolved	55	b,f			--		--		--		--		--	
Copper - Total					--		--		--		--		--	
Copper - Dissolved	9	a,f			--		--		--		--		--	
Volatile Organic Compounds														
1,2-Dichloroethylene(cis)	590	a,d			0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	21,900	a,c	47	a,d	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	840	a,c	98	a,d	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl Chloride	6,500	b,d			0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

Notes:
U = Not detected at indicated quantitation limit
J = Estimated concentration
Bold value = detected concentration
Shaded cell = concentration exceeds screening level value
(a) DEQ (2001) SLV @ Q = 1
(b) DEQ (2001) SLV @ Q = 5
(c) Interim guidance value from OAR 340-41
(d) Tier II Chronic Value (Suter & Tsao, 1996)
(e) Final Chronic Value (EPA, 2003)
(f) National Recommended WQC (EPA, 2002)

TABLE 13
Shoreline Groundwater Comparison with Surface Water Screening Criteria (μg/L)
McCall Oil and Chemical

	DEQ Screening Levels																							
	DEQ (2001) Level II SLV	Reference	Updated Level II SLV	Reference	MW-7 10/25/01		MW-7 03/08/02		MW-7 10/04/02		MW-7 02/12/04		MW-7 Dup 02/12/04		MW-8 10/25/01		MW-8 03/07/02		MW-8 10/04/02		MW-8 02/12/04		MW-14 02/11/04	
Low Molecular Weight PAHs																								
Naphthalene	620	a,c	194	e	5.00	U	**0.086**	J	**0.020**	J	0.012	U	0.012	U	5.00	U	**0.16**	J	**0.38**		**0.031**	J	**0.023**	J
Acenaphthylene			307	e	5.00	U	**0.025**	J	0.011	U	0.011	U	0.011	U	5.00	U	0.011	U	**0.210**		0.011	U	0.011	U
Acenaphthene	520	a,c	56	e	5.00	U	0.0092	U	0.0088	U	0.0088	U	**0.045**	J	5.00	U	**0.58**		**0.78**		**0.34**		**0.0310**	J
Fluorene	3.9	a,d	39	e	5.00	U	0.013	U	0.012	U	0.012	U	0.012	U	5.00	U	**0.56**		**0.91**		**0.36**		0.012	U
Phenanthrene	6.3	a,d	19	e	5.00	U	**0.077**	J	**0.034**	J	**0.024**	J	**0.036**	J	5.00	U	**1.2**		**1.7**		**0.22**		0.011	U
Anthracene			21	e	5.00	U	**0.039**	J	**0.031**	J	**0.019**	J	**0.029**	J	5.00	U	**0.097**	J	**0.380**		**0.028**	J	0.015	U
2-Methylnaphthalene			72	e	5.00	U	**0.034**	J	0.012	U	0.012	U	0.012	U	5.00	U	**0.081**	J	**0.160**	J	0.012	U	0.012	U
High Molecular Weight PAHs																								
Fluoranthene	6.2	a,d	7.1	e	5.00	U	**0.061**	J	0.013	U	0.013	U	0.013	U	5.00	U	**0.22**		**0.73**		**0.035**	J	0.013	U
Pyrene			10	e	5.00	U	**0.089**	J	**0.025**	J	0.015	U	0.015	U	5.00	U	**0.34**		**1.10**		**0.066**	J	0.015	U
Benz(a)anthracene	0.14	b,d	2.2	e	5.00	U	**0.044**	J	0.012	U	0.012	U	0.012	U	5.00	U	**0.071**	J	**0.390**		0.012	U	0.012	U
Chrysene			2.0	e	5.00	U	**0.045**	J	0.014	U	0.014	U	0.014	U	5.00	U	**0.16**	J	**0.56**		0.014	U	0.014	U
Benzo(b)fluoranthene			0.68	e	5.00	U	0.021	U	0.020	U	0.020	U	0.020	U	5.00	U	**0.064**	J	**0.350**		0.020	U	0.020	U
Benzo(k)fluoranthene			0.64	e	5.00	U	0.021	U	0.020	U	0.020	U	0.020	U	5.00	U	0.02	U	**0.13**	J	0.02	U	0.020	U
Benzo(a)pyrene	0.07	b,d	0.96	e	5.00	U	0.017	U	0.016	U	0.016	U	0.016	U	5.00	U	**0.089**	J	**0.360**		0.016	U	0.016	U
Indeno(1,2,3-cd)pyrene			0.28	e	5.00	U	0.026	U	0.024	U	0.024	U	0.024	U	5.00	U	**0.04**	J	**0.25**		0.02	U	0.024	U
Dibenz(a,h)anthracene			0.28	e	5.00	U	0.032	U	0.031	U	0.031	U	0.031	U	5.00	U	0.031	U	0.031	U	0.031	U	0.031	U
Benzo(g,h,i)perylene			0.44	e	5.00	U	**0.099**	J	0.017	U	0.017	U	0.017	U	5.00	U	**0.057**	J	**0.310**		0.017	U	0.017	U
Miscellaneous Semivolatiles																								
3- and 4-Methylphenol					5.00	U	**1.1**		0.05	U	0.051	U	0.051	U	5.00	U	**0.22**	J	**1.60**		0.051	U	0.051	U
Dibenzofuran	19	b,d			5.00	U	0.014	U	0.014	U	0.014	U	0.014	U	5.00	U	**0.18**	J	0.014	U	**0.092**	J	0.014	U
Butyl Benzyl Phthalate	95	b,d			5.00	U	0.027	U	0.026	U	0.026	U	0.026	U	5.00	U	**0.13**	J	0.026	U	0.026	U	0.026	U
Di-n-octyl Phthalate	3,500	b,d			5.00	U	0.034	U	0.032	U	0.032	U	0.032	U	5.00	U	0.032	U	0.032	U	0.032	U	0.032	U
Metals																								
Arsenic - Total					**18**		**4.4**		--		**5.0**		**5.0**		**44**		**4.3**		--		**5.4**		**1.5**	
Arsenic - Dissolved	750	b,f			**3.0**		**3.5**		**9.1**		**5.1**		**5.1**		**2.3**		**8.6**		**9.6**		**5.6**		**1.5**	
Chromium - Total					**127**		**9.1**		--		**0.7**		**0.8**		**225**		**15**		--		**1.7**		**1.3**	
Chromium - Dissolved	55	b,f			1.0	U	**2.3**		**2.1**		**2.0**		**0.7**		1.0	U	**2.9**		**1.4**		**0.8**		**2.6**	
Copper - Total					**164**		**19.1**		--		**0.5**		**0.4**		**394**		**36**		--		**2.0**		**1.7**	
Copper - Dissolved	9	a,f			2.0	U	**1.3**		**0.7**		**0.7**		**0.3**		2.0	U	**1.3**		**0.3**		**0.2**		**1.3**	
Volatile Organic Compounds																								
1,2-Dichloroethylene(cis)	590	a,d			**2.9**		**2.1**		**2.5**		**5.2**		**5.3**		**1.2**		0.5	U	**1.1**		0.5	U	0.5	U
Trichloroethylene	21,900	a,c	47	a,d	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	840	a,c	98	a,d	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl Chloride	6,500	b,d			1.0	U	0.5	U	0.5	U	**1.4**		**1.4**		1.0	U	0.5	U	0.5	U	0.5	U	0.5	U

Notes:
U = Not detected at indicated quantitation limit
J = Estimated concentration
Bold value = detected concentration
Shaded cell = concentration exceeds screening level value
(a) DEQ (2001) SLV @ Q = 1
(b) DEQ (2001) SLV @ Q = 5
(c) Interim guidance value from OAR 340-41
(d) Tier II Chronic Value (Suter & Tsao, 1996)
(e) Final Chronic Value (EPA, 2003)
(f) National Recommended WQC (EPA, 2002)

TABLE 14
Comparison of Stormwater Data to Surface Water Criteria (µg/L)
McCall Oil and Chemical

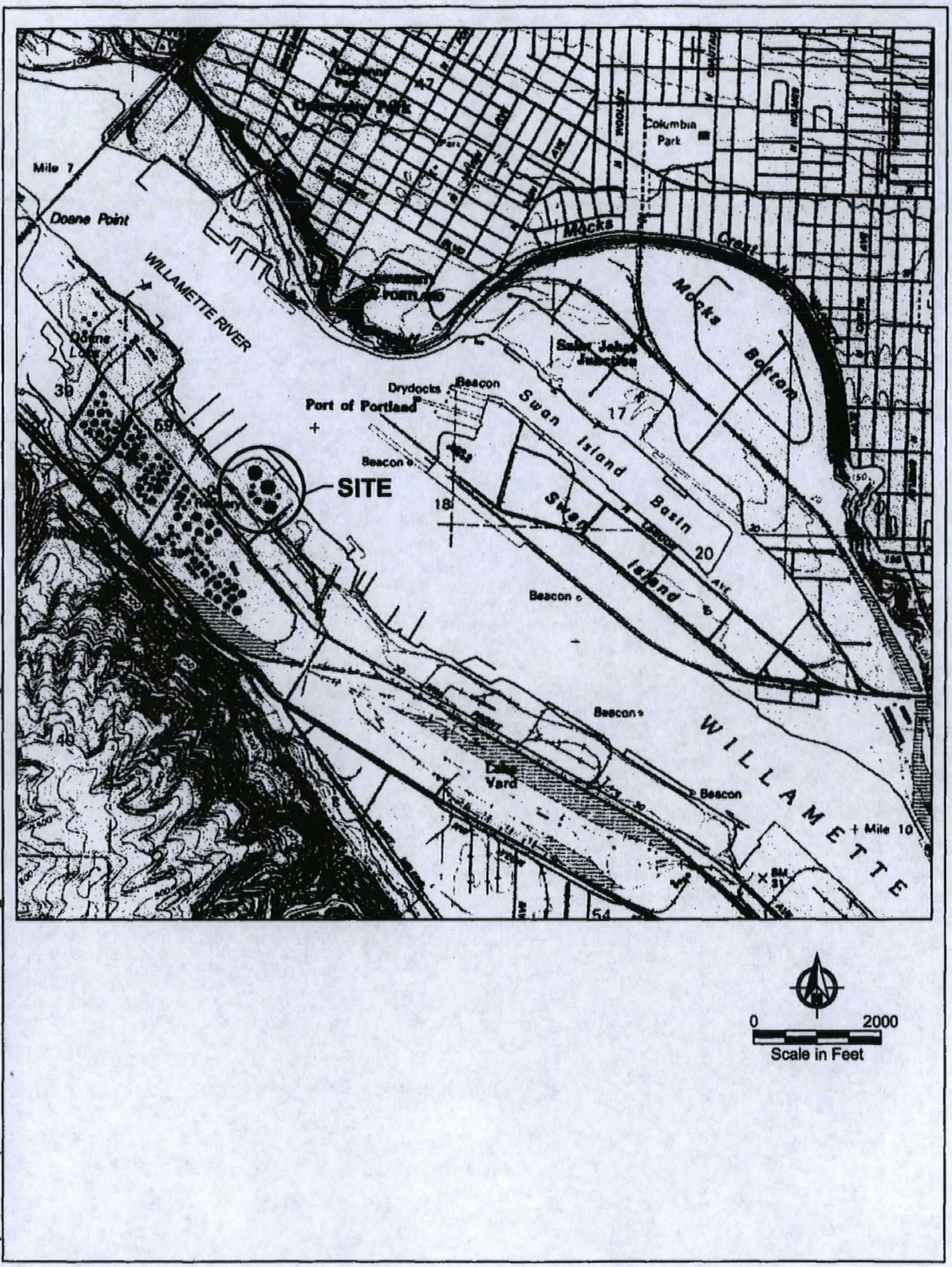
	Screening Levels																				
	Acute WQC	Acute WQC x 5	Reference	S-1 12/20/00		S-1 03/06/02		S-2 12/20/00		S-2 03/06/02		S-3 12/20/00		S-3 03/06/02		S-4 12/20/00		S-4 Dupe 12/20/00		S-4 04/09/02	
Low Molecular Weight PAHs																					
Naphthalene	807	4,035	a	0.03	J	0.03	J	0.07	J	0.025	J	0.07	J	0.025	J	0.04	J	0.04	J	0.012	U
Acenaphthylene	1,277	6,386	a	0.006	J	0.011	U	0.02	J	0.011	U	0.095	U	0.011	U	0.095	U	0.096	U	0.011	U
Acenaphthene	233	1,165	a	0.02	J	0.0088	U	0.02	J	0.0092	U	0.095	U	0.0089	U	0.14		0.12		0.085	J
Fluorene	162	811	a	0.02	J	0.012	U	0.04	J	0.013	U	0.02	J	0.013	U	0.36		0.34		0.17	J
Phenanthrene	79	395	a	0.07	J	0.032	J	0.25		0.043	J	0.20		0.054	J	0.46		0.35		0.073	J
Anthracene	87	437	a	0.006	U	0.015	U	0.02	J	0.016	U	0.095	U	0.015	U	0.02	J	0.01	J	0.015	U
2-Methylnaphthalene	300	1,498	a	0.03	J	0.016	J	0.05	J	0.014	J	0.096		0.012	U	0.09	J	0.10		0.012	U
High Molecular Weight PAHs																					
Fluoranthene	30	148	a	0.02	J	0.013	U	0.099		0.022	J	0.06	J	0.023	J	0.06	J	0.05	J	0.01	U
Pyrene	42	208	a	0.02	J	0.015	U	0.12		0.025	J	0.03	J	0.022	J	0.19		0.16		0.10	J
Benz(a)anthracene	9.2	46	a	0.005	U	0.012	U	0.03	J	0.013	U	0.007	J	0.012	U	0.03	J	0.02	J	0.012	U
Chrysene	8.3	42	a	0.008	J	0.014	U	0.06	J	0.015	U	0.03	J	0.015	U	0.12		0.09	J	0.014	U
Benzo(b)fluoranthene	2.8	14	a	0.006	J	0.020	U	0.04	J	0.021	U	0.01	J	0.020	U	0.03	J	0.03	J	0.020	U
Benzo(k)fluoranthene	2.7	13	a	0.004	J	0.020	U	0.03	J	0.021	U	0.008	J	0.020	U	0.02	J	0.01	J	0.020	U
Benzo(a)pyrene	4.0	20	a	0.006	U	0.016	U	0.03	J	0.017	U	0.095	U	0.017	U	0.03	J	0.02	J	0.016	U
Indeno(1,2,3-cd)pyrene	1.2	6	a	0.006	J	0.024	U	0.04	J	0.026	U	0.01	J	0.025	U	0.02	J	0.02	J	0.024	U
Dibenz(a,h)anthracene	1.2	6	a	0.004	U	0.031	U	0.009	J	0.032	U	0.19	U	0.031	U	0.009	J	0.008	J	0.031	U
Benzo(g,h,i)perylene	1.8	9	a	0.007	J	0.017	U	0.06	J	0.018	U	0.01	J	0.017	U	0.04	J	0.03	J	0.017	U
Miscellaneous Semivolatiles																					
3- and 4-Methylphenol	--	--		0.3	J	0.23	J	0.49		0.089	J	0.48	U	0.220	J	0.2	J	0.2	J	0.051	U
Dibenzofuran	66	330	b	0.01	J	0.014	U	0.02	J	0.014	U	0.01	U	0.019	J	0.13		0.11		0.11	J
Butyl Benzyl Phthalate	19	95	b,c	0.1	J	0.19	J	0.1	J	0.05	J	0.08	J	0.092	J	0.05	J	0.04	J	0.14	J
Di-n-octyl Phthalate	708	3,540	b,c	0.003	U	0.032	U	0.003	U	0.032	U	0.95	U	0.033	U	0.95	U	0.96	U	0.032	U
Metals*																					
Arsenic - Total	n/a	n/a		0.5	U	0.5	U	1	U	0.5	U			0.5	U					0.6	
Arsenic - Dissolved	340	1,700	d									1	U			0.5	U	0.5	U		
Chromium - Total	n/a	n/a		0.4		0.4		2.0		0.6				1.2						0.9	
Chromium - Dissolved	16	80	d,e									2.9				0.8		0.6			
Copper - Total	n/a	n/a		3.8		3.7		9.9		6.0				13						9.0	
Copper - Dissolved	13	65	d									30				4.9		4.7			

Notes:
U = Not detected at indicated quantitation limit; J = Estimated concentration
* Metals criteria are dissolved basis; if no dissolved data available, metals are compared to total concentrations
(a) EPA, 2003; Final Chronic Value x Acute/Chronic Ratio (4.16)
(b) Suter and Tsao, 1996; Tier II Acute Value
(c) No Acute Value available; value shown is Tier II Chronic Value
(d) EPA, 2002; National Recommended Water Quality Criteria
(e) Value shown is for the more toxic Chromium-VI species

Table 15
Sampling Plan
McCall Oil and Chemical

Well	Chlorinated VOCs	PAHs	Total Petroleum Hydrocarbons	As (Total and Dissolved)	Cr, Cu (Total and Dissolved)
EX-1	X		X	X	
EX-2		X	X	X	
EX-3		X	X	X	
EX-4 (MW-2)	X		X	X	
EX-7			X	X	
MW-1	X		X	X	X
MW-3	X		X	X	X
MW-5	X	X	X	X	
MW-6	X		X	X	
MW-7	X	X	X	X	X
MW-8	X	X	X	X	X
MW-9			X	X	
MW-10	X		X	X	
MW-12			X	X	
MW-14	X	X	X	X	X
MW-15	X	X	X	X	

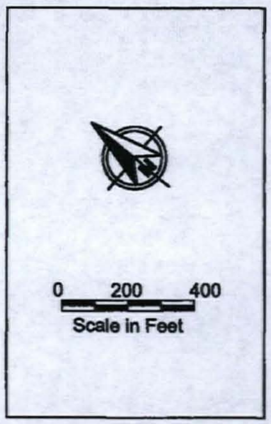
Note: Samples will be collected semiannually



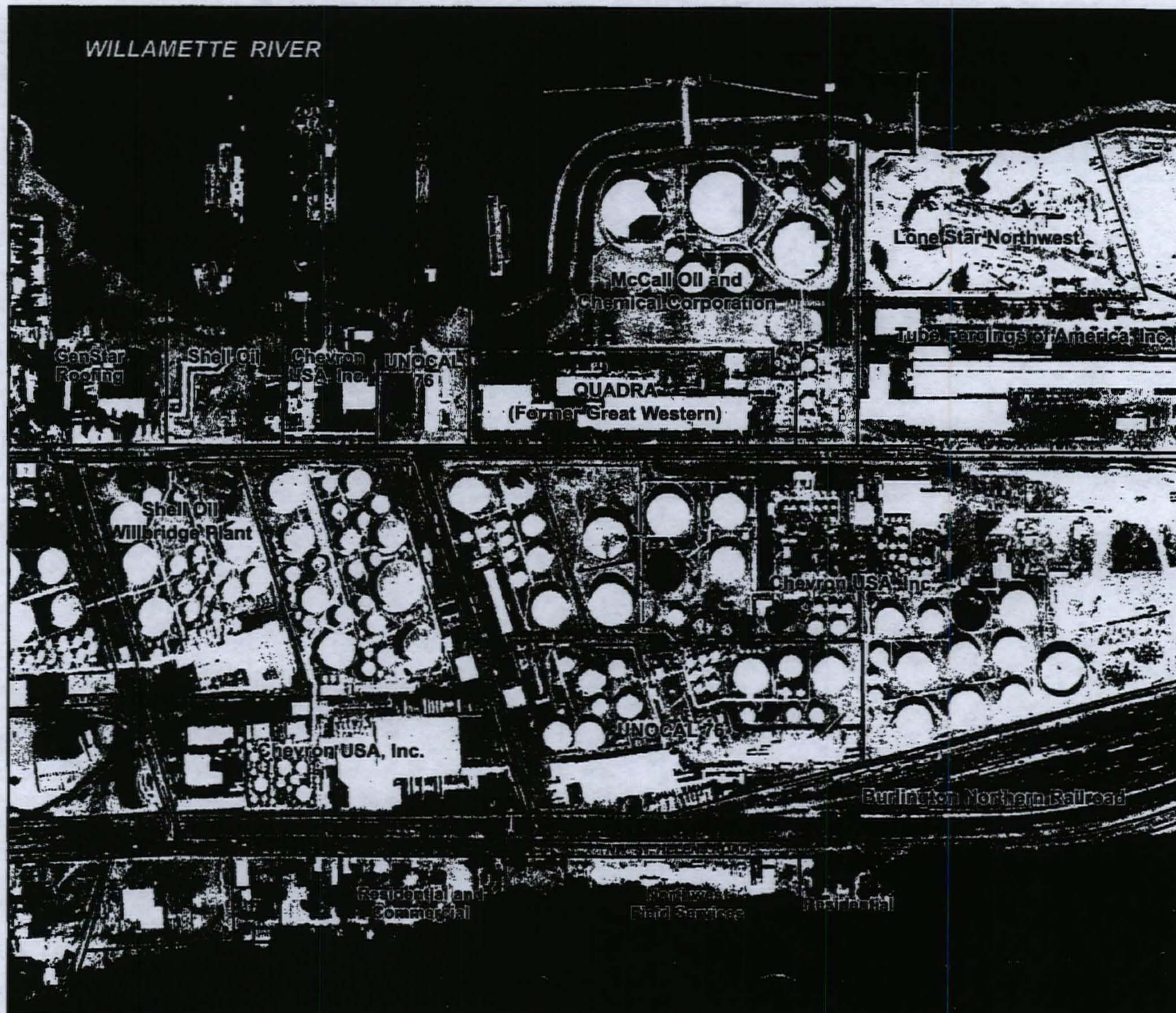
May 09, 2003 2:18pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1A
Vicinity Map
McCall Oil and Chemical

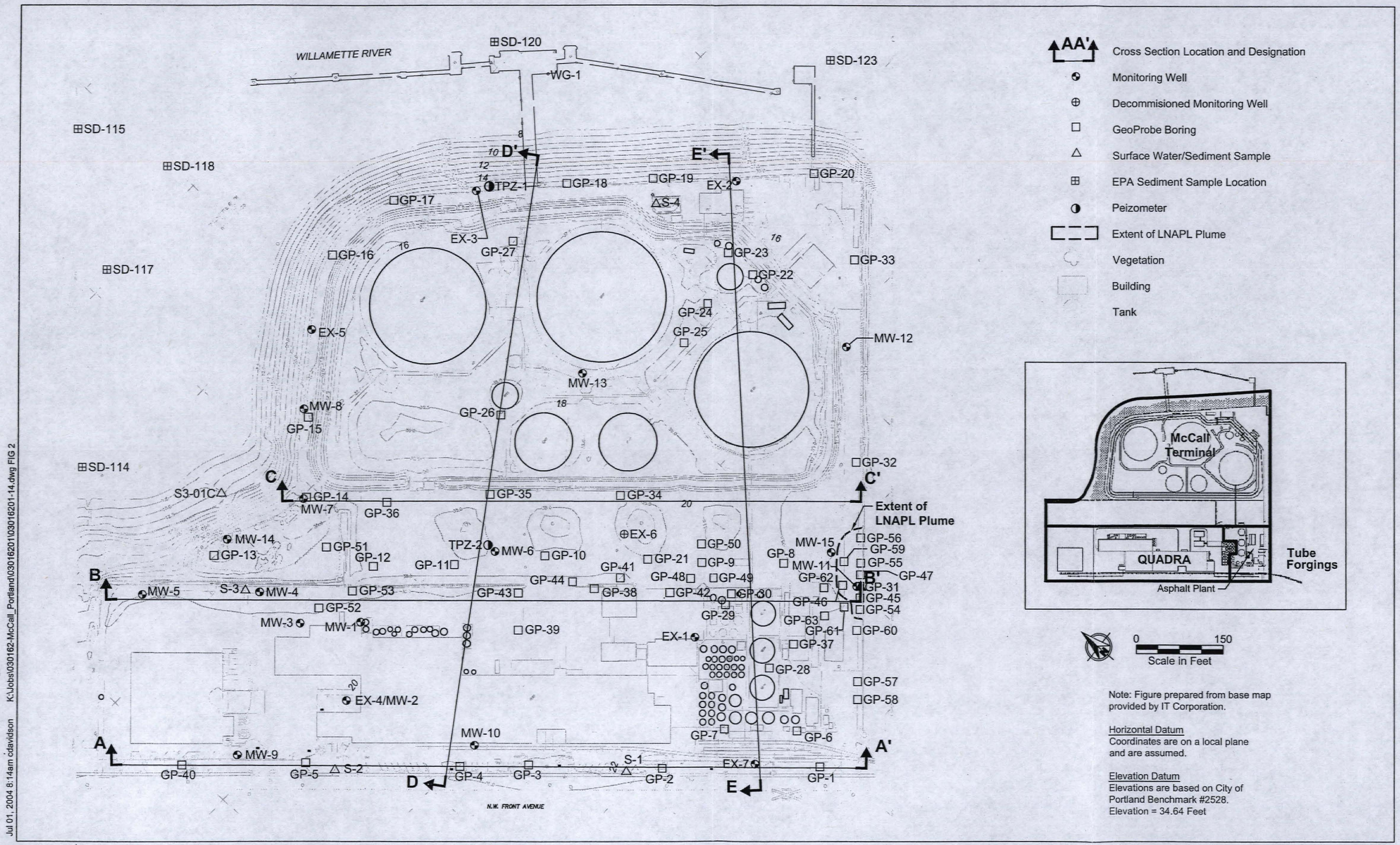


* Land use based on 1993 assessment records



ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1B
Land Use Map
McCall Oil
Portland, Oregon

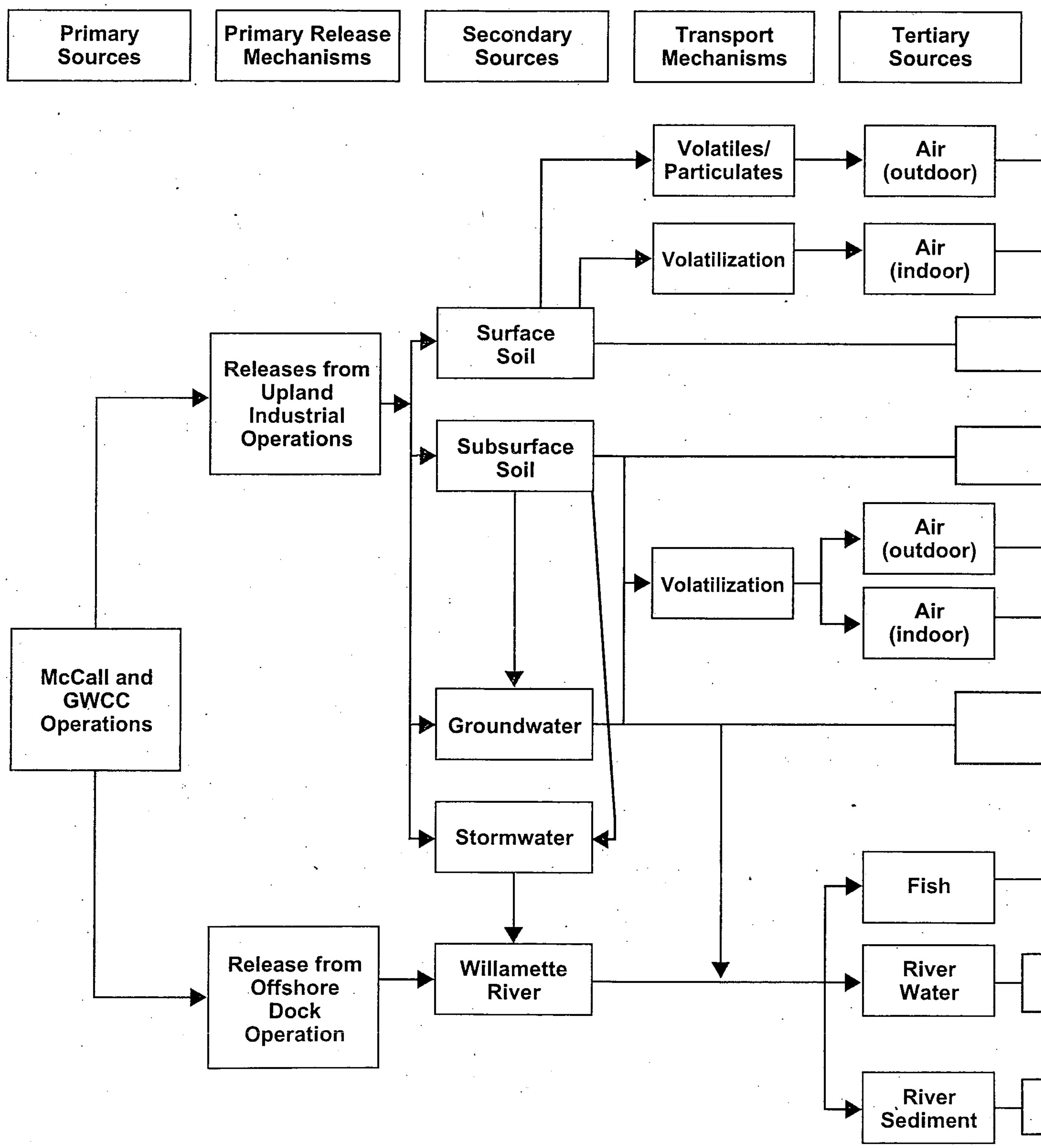


Jul 01, 2004 8:14am cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-14.dwg FIG 2

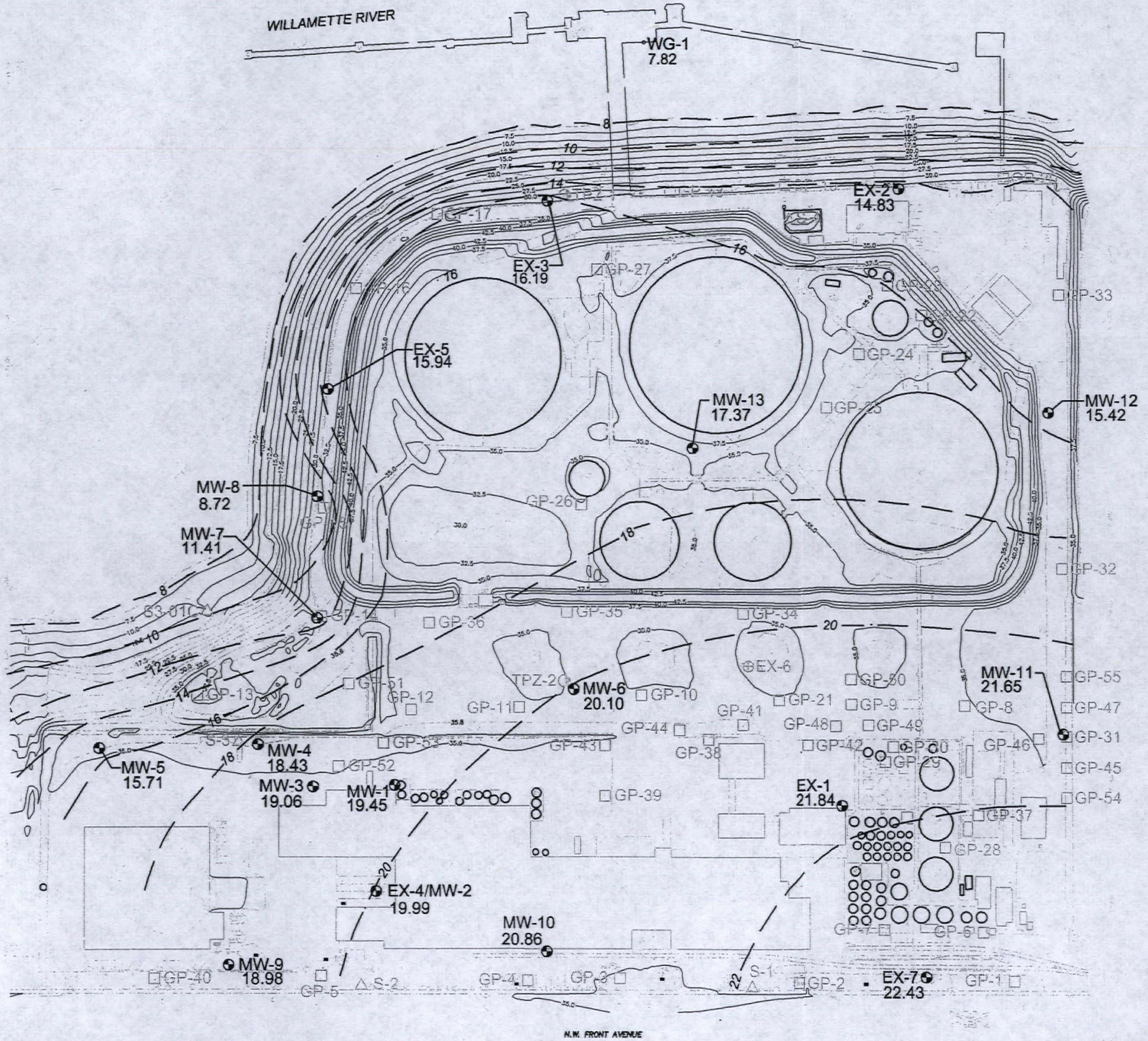
ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Boring and Well Location Map
McCall Oil and Chemical

Figure 3
McCall Oil & Chemical Conceptual Site Model



	Potential Receptors				
	Human				Ecological
Exposure Route	Industrial Onsite Worker	Construction Worker	Trench Worker	Recreation	Aquatic & Wildlife
Inhalation	+	+	+	−	−
Inhalation	+	+	+	−	−
Ingestion	+	+	+	−	−
Dermal Contact	+	+	+	−	−
Ingestion	−	+	+	−	−
Dermal Contact	−	+	+	−	−
Inhalation	+	+	+	−	−
Inhalation	+	+	+	−	−
Ingestion	−	−	−	−	−
Dermal Contact	−	−	−	−	−
Ingestion	−	−	−	+	+
Ingestion	−	−	−	−	+
Dermal Contact	−	−	−	−	+
Ingestion	+	−	−	−	+
Dermal Contact	+	−	−	−	+



Groundwater Elevation Contour in Feet

15.42 Groundwater Elevation in Feet

Monitoring Well

Decommisioned Monitoring Well

GeoProbe Boring

Surface Water/Sediment Sample

Peizometer

Vegetation

Building

Tank

Horizontal Datum
Coordinates are on a local plane and are assumed.

Elevation Datum
Elevations are based on City of Portland Benchmark #2528.
Elevation = 34.64 Feet

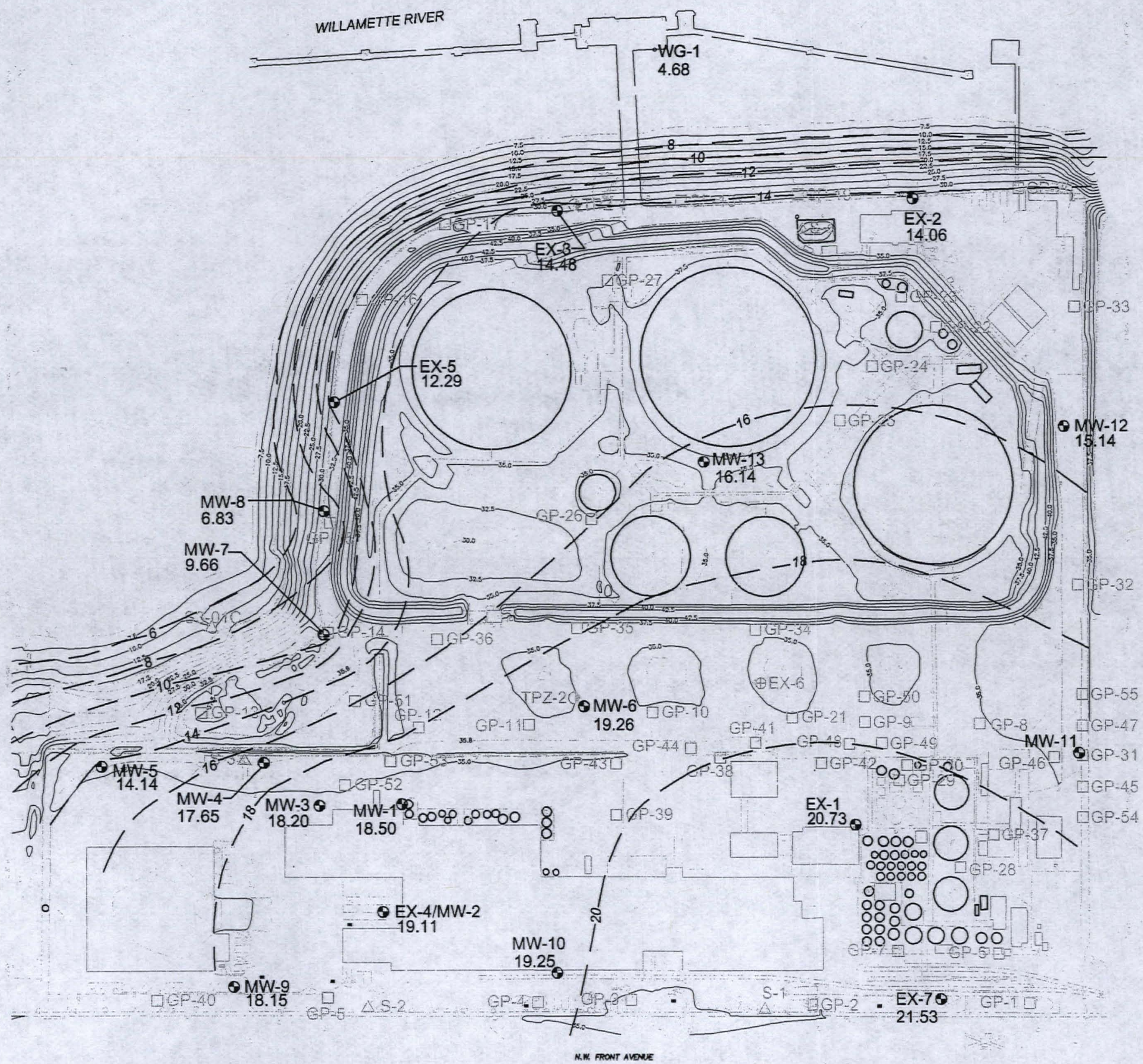
0 150
Scale in Feet

Note: Figure prepared from base map provided by IT Corporation.

May 12, 2003 8:35am cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-01.dwg FIG 4

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 4
Groundwater Potentiometric Surface Contour Map
March 2002
McCall Oil and Chemical



Groundwater Elevation Contour in Feet

15.42 Groundwater Elevation in Feet

Monitoring Well

Decommisioned Monitoring Well

GeoProbe Boring

Surface Water/Sediment Sample

Peizometer

Vegetation

Building

Tank

Horizontal Datum
Coordinates are on a local plane and are assumed.

Elevation Datum
Elevations are based on City of Portland Benchmark #2528. Elevation = 34.64 Feet

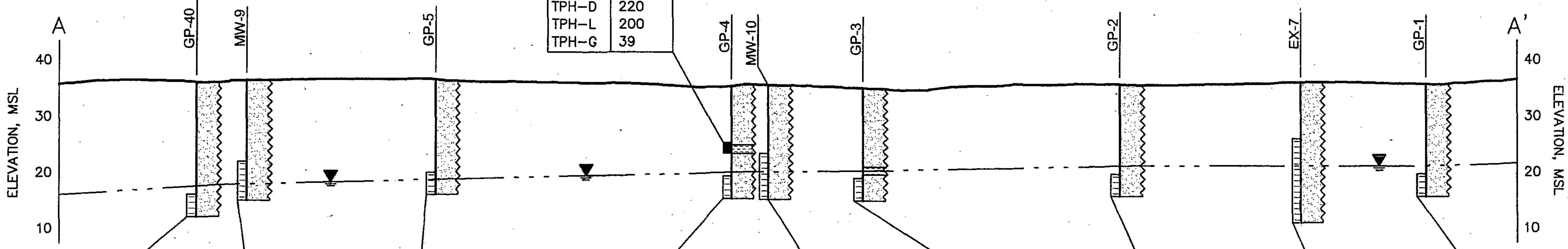
0 150
Scale in Feet

Note: Figure prepared from base map provided by IT Corporation.

May 12, 2003 8:38am cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-02.dwg FIG 5

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 5
Groundwater Potentiometric Surface Contour Map
October 2002
McCall Oil and Chemical



GP-4	
VOCs	ND
HPAH	730
LPAH	150
SVOCs	
4M	ND
DB	ND
BBP	ND
DNP	ND
TPH-D	220
TPH-L	200
TPH-G	39

	GP-40	MW-9 (1/22/02)	GP-5	GP-4	MW-10 (1/22/02)	GP-3	GP-2	EX-7 (12/20/00)	GP-1
VOCs	ND	ND	ND	ND	0.57	ND	ND	ND	ND
HPAH	2.18	1.72	0.19	61.5	0.55	0.33	3.52	0.016	1.05
LPAH	0.67	0.71	0.378	646	0.30	26.69	0.65	ND	0.46
SVOCs									
4M	0.04	ND	0.04	ND	ND	0.03	0.02	ND	0.07
DB	0.01	ND	ND	19	ND	1.0	0.01	ND	0.01
BBP	1.00	ND	0.01	ND	0.045	0.02	0.30	ND	0.08
DNP	ND	MD	ND	ND	ND	ND	ND	ND	ND
TPH-D	640	480	430	7100	250	280	ND	ND	ND
TPH-L	ND	310	300	4400	510	ND	ND	ND	ND
TPH-G	ND	140	620	2500	ND	170	130	ND	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS – LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS – GASOLINE

ND – NOT DETECTED
NT – NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

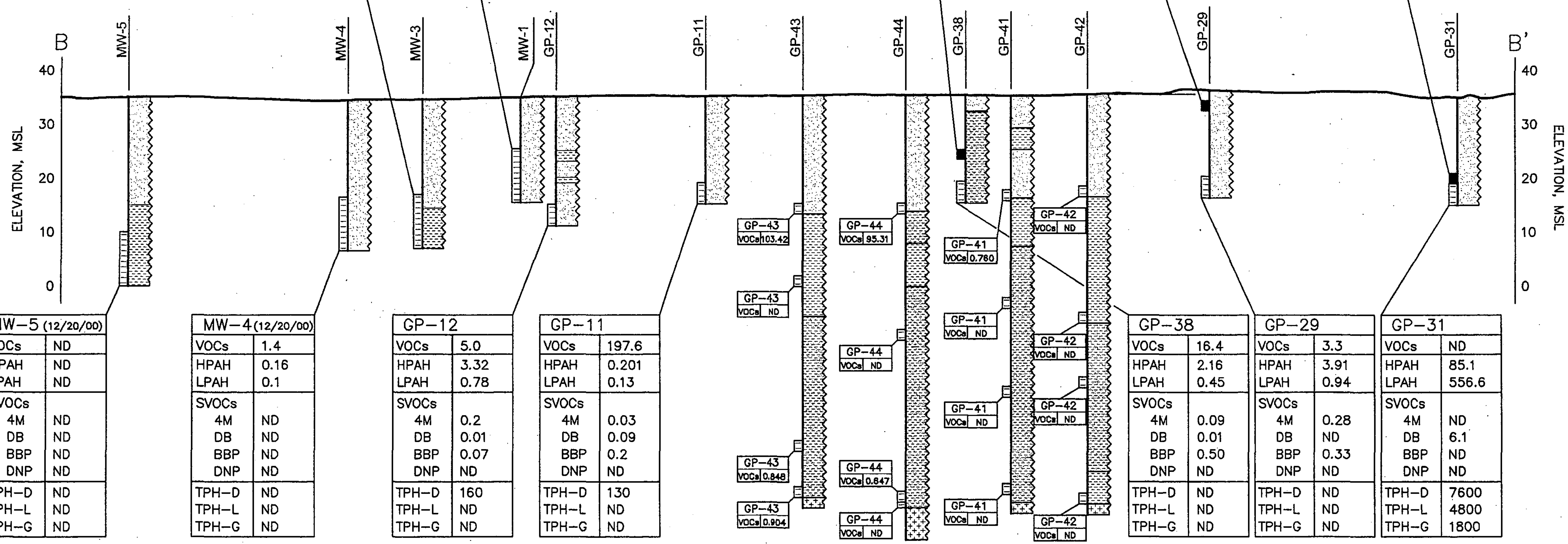
Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 4:40pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-03.dwg FIG 6A

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6A
Cross Section A-A'
McCall Oil and Chemical



	MW-3 (12/20/00)	MW-1 (12/20/00)	GP-38	GP-29	GP-31
VOCs	1.2	4.59	ND	ND	ND
HPAH	0.113	ND	1934	13630	42700
LPAH	0.32	ND	2113	21370	255100
SVOCs					
4M	ND	ND	1000	ND	ND
DB	ND	ND	45	ND	3000
BBP	ND	ND	ND	ND	ND
DNP	ND	ND	ND	ND	ND
TPH-D	ND	ND	930	18000	35000
TPH-L	ND	ND	440	36000	38000
TPH-G	720	1200	47	710	6300

	MW-5 (12/20/00)	MW-4 (12/20/00)	GP-12	GP-11	GP-38	GP-29	GP-31
VOCs	ND	1.4	5.0	197.6	16.4	3.3	ND
HPAH	ND	0.16	3.32	0.201	2.16	3.91	85.1
LPAH	ND	0.1	0.78	0.13	0.45	0.94	556.6
SVOCs							
4M	ND	ND	0.2	0.03	0.09	0.28	ND
DB	ND	ND	0.01	0.09	0.01	ND	6.1
BBP	ND	ND	0.07	0.2	0.50	0.33	ND
DNP	ND	ND	ND	ND	ND	ND	ND
TPH-D	ND	ND	160	130	ND	ND	7600
TPH-L	ND	ND	ND	ND	ND	ND	4800
TPH-G	ND	ND	ND	ND	ND	ND	1800

TABLE DESCRIPTIONS

GP-1	
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS – LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS – GASOLINE

GP-1 — WELL NAME

ND – NOT DETECTED

NT – NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- BEDROCK
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

Horizontal Scale in Feet: 0 100 200

Vertical Scale in Feet: 0 20 40

Vertical Exaggeration x 5

Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 1:02pm cdavidson I:\CADJobs\030162-McCall_Portland\030162\01\030162\01-04.dwg FIG 6B

ANCHOR ENVIRONMENTAL, L.L.C.

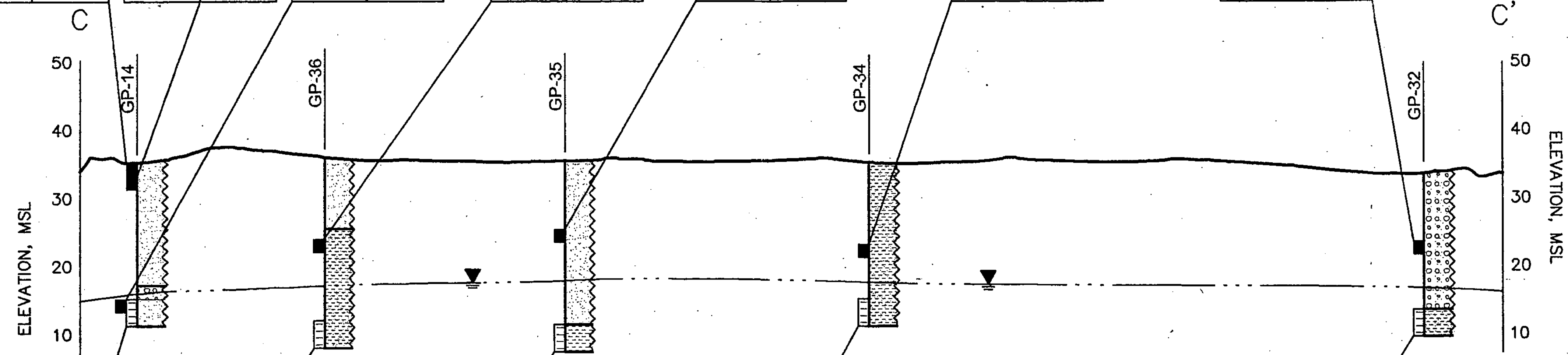
Figure 6B
Cross Section B-B'
McCall Oil and Chemical

Shallower samples (boxes above cross section):

	GP-14	GP-14	GP-14	GP-36	GP-35	GP-34	GP-32
VOCs	NT	NT	NT	ND	ND	ND	ND
HPAH	55	42	704	369	165	425	29
LPAH	2.2	2.3	106.9	181	38	206	9
SVOCs							
4M	ND	ND	ND	80	ND	ND	ND
DB	0.6	0.7	2.0	6	0.8	8	ND
BBP	ND	ND	ND	ND	0.7	ND	ND
DNP	ND	ND	ND	ND	ND	ND	ND
TPH-D	14	ND	30	240	25	48	ND
TPH-L	55	ND	110	430	55	160	29
TPH-G	ND	ND	ND	18	ND	ND	ND

C

C'



Deeper samples (boxes below cross section):

	GP-14	GP-36	GP-35	GP-34	GP-32
VOCs	15.75	26.6	109.5	ND	ND
HPAH	2.95	2.81	5.39	0.84	7.2
LPAH	0.63	1.00	1.37	0.53	18.1
SVOCs					
4M	0.2	0.67	1.5	0.75	1.4
DB	0.02	0.03	0.03	0.05	0.2
BBP	ND	0.83	0.43	0.13	0.65
DNP	ND	ND	ND	ND	ND
TPH-D	ND	210	200	2100	700
TPH-L	ND	ND	270	580	1100
TPH-G	ND	ND	ND	130	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS - DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS - LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS - GASOLINE

ND - NOT DETECTED
NT - NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

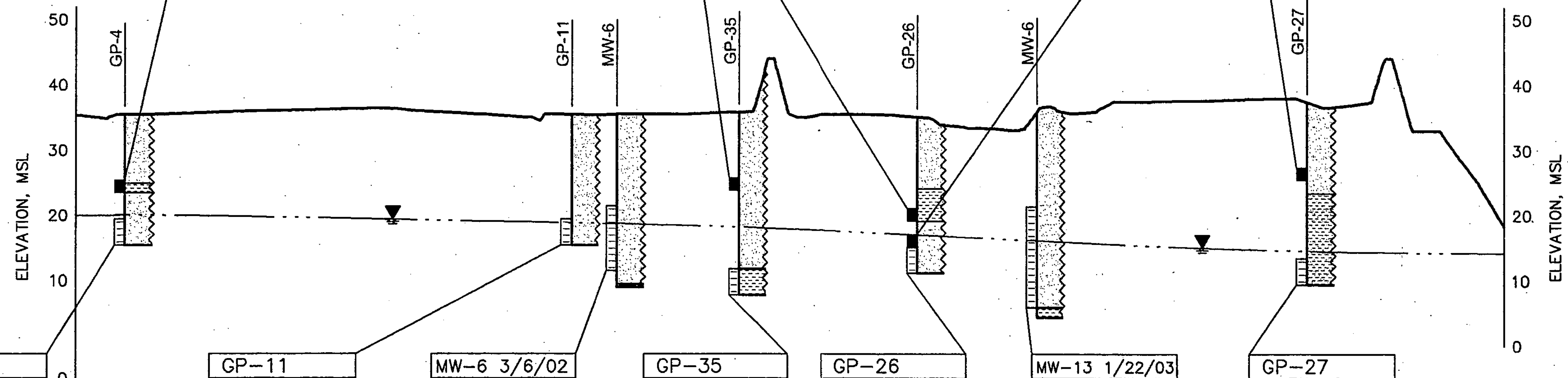
Note: Drawing modified from electronic file provided by IT Corporation.

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6C
Cross Section C-C'
McCall Oil and Chemical

D — D'

	GP-4	GP-35	GP-26	GP-26	GP-27
VOCs	ND	ND	ND	ND	ND
HPAH	730	165	501	68	49
LPAH	150	38	226	36	21
SVOCs					
4M	ND	ND	180	ND	ND
DB	ND	0.8	9	2	0.8
BBP	ND	0.7	ND	ND	2
DNP	ND	ND	ND	ND	ND
TPH-D	220	25	68	ND	ND
TPH-L	200	55	170	ND	48
TPH-G	39	ND	ND	ND	ND



	GP-4	GP-11	MW-6 3/6/02	GP-35	GP-26	MW-13 1/22/03	GP-27
VOCs	ND	197.6	1306.4	109.5	ND	ND	ND
HPAH	61.5	0.201	1.00	5.39	0.710	0.37	0.94
LPAH	646	0.13	0.38	1.37	0.52	0.54	1.53
SVOCs							
4M	ND	0.03	0.073	1.5	1.3	28	0.49
DB	19	0.09	ND	0.03	0.02	0.018	0.12
BBP	ND	0.2	ND	0.43	0.08	ND	1.7
DNP	ND	ND	ND	ND	ND	ND	ND
TPH-D	7100	130	240	200	300	1000	170
TPH-L	4400	ND	500	270	500	2300	ND
TPH-G	2500	ND	160	ND	ND	300	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS – LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS – GASOLINE
ND	NOT DETECTED
NT	NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

Horizontal Scale in Feet: 0 100 200

Vertical Scale in Feet: 0 20 40

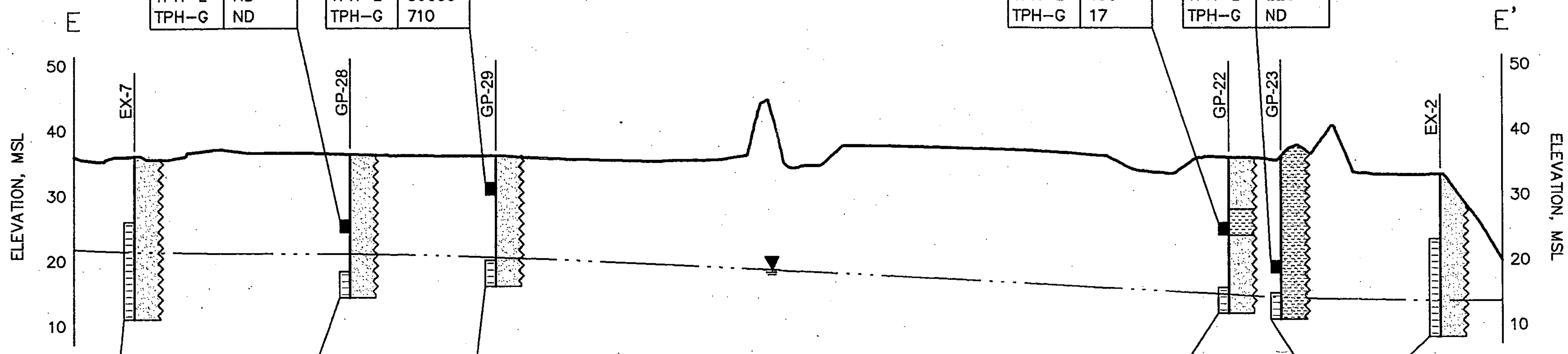
Vertical Exaggeration x 5

Note: Drawing modified from electronic file provided by IT Corporation.

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6D
Cross Section D-D'
McCall Oil and Chemical

	GP-28	GP-29	GP-22	GP-23
VOCs	ND	ND	ND	ND
HPAH	1	13630	261	496
LPAH	ND	21370	512	154
SVOCs				
4M	ND	ND	ND	60
DB	ND	ND	32	6
BBP	ND	ND	ND	ND
DNP	ND	ND	ND	ND
TPH-D	ND	18000	310	80
TPH-L	ND	36000	160	220
TPH-G	ND	710	17	ND



	EX-7	GP-28	GP-29	GP-22	GP-23	EX-2 (12/20/00)
VOCs	ND	ND	33	ND	ND	ND
HPAH	0.016	1.64	3.91	0.406	0.205	0.10
LPAH	ND	0.12	0.94	19.53	0.22	0.078
SVOCs						
4M	ND	ND	0.28	0.1	0.2	0.02
DB	ND	ND	ND	0.86	0.097	ND
BBP	ND	0.25	0.33	0.098	0.05	ND
DNP	ND	ND	ND	ND	ND	ND
TPH-D	ND	ND	ND	1100	440	ND
TPH-L	ND	ND	ND	ND	ND	ND
TPH-G	ND	ND	ND	210	ND	ND

TABLE DESCRIPTIONS

GP-1	WELL NAME
VOCs	TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS
HPAH	HEAVY POLYNUCLEAR AROMATIC HYDROCARBONS
LPAH	LIGHT POLYNUCLEAR AROMATIC HYDROCARBONS
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
4M	4-METHYLPHENOL
DB	DIBENZOFURAN
BBP	BUTYL BENZYL PHTHALATE
DNP	DI-N-OCTYL PHTHALATE
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL
TPH-L	TOTAL PETROLEUM HYDROCARBONS – LUBE OIL
TPH-G	TOTAL PETROLEUM HYDROCARBONS – GASOLINE
ND	NOT DETECTED
NT	NOT TESTED

GEOLOGY LEGEND:

- GRAVEL
- SAND
- SILTY SAND
- SILT
- GEOPROBE OR WELL SCREEN
- SOIL SAMPLE LOCATION
- ESTIMATED WATER TABLE ELEVATION (FT. MSL)

ALL DETECTED CONCENTRATIONS REPORTED IN PARTS PER BILLION, EXCEPT SOIL TPH REPORTED IN PARTS PER MILLION.

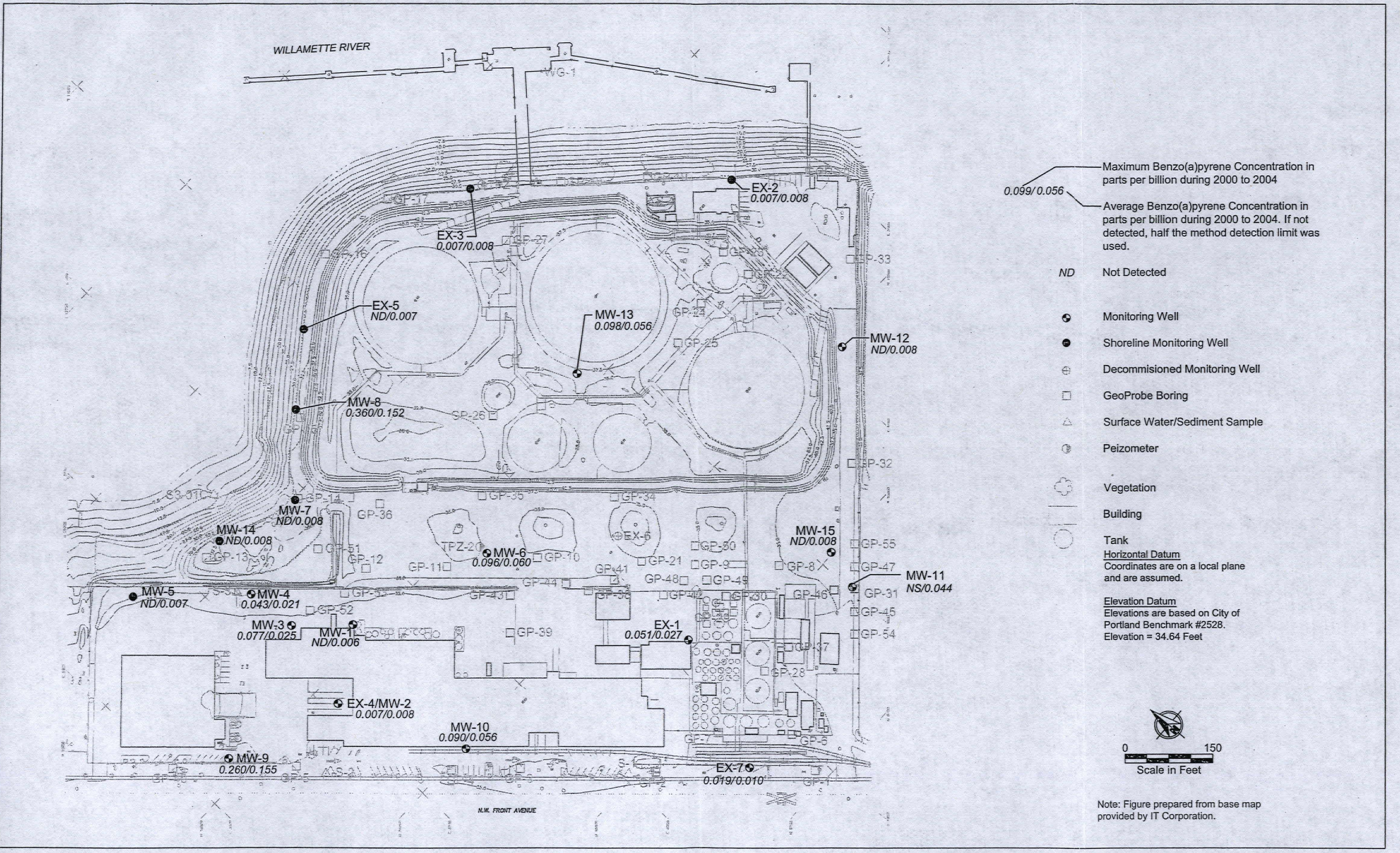
Horizontal Scale in Feet
0 100 200
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 5

Note: Drawing modified from electronic file provided by IT Corporation.

May 09, 2003 1:11pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\03016201\03016201-07.dwg FIG 6E

ANCHOR ENVIRONMENTAL, L.L.C.

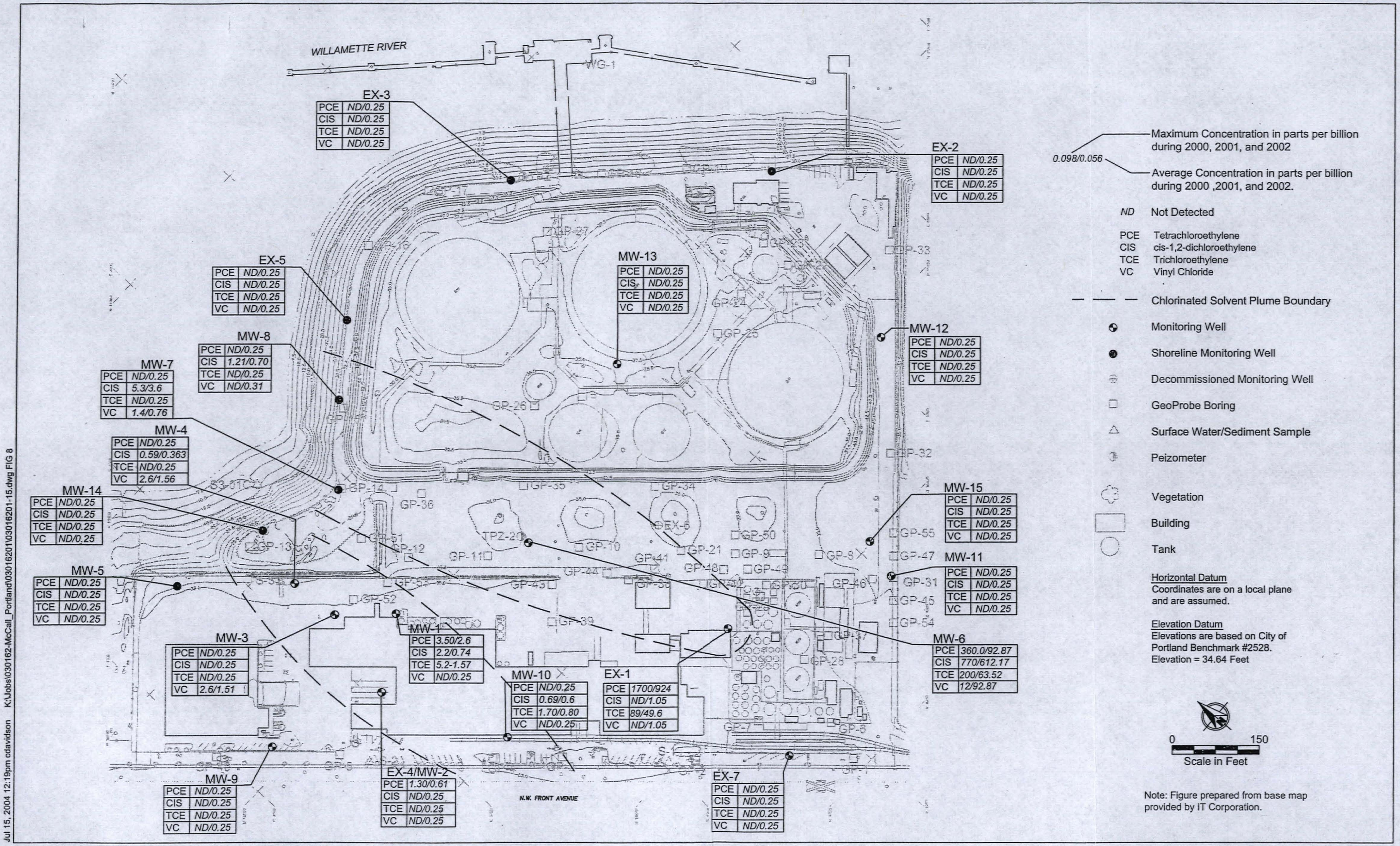
Figure 6E
Cross Section E-E'
McCall Oil and Chemical



Jul 15, 2004 12:20pm cdavidson K:\Jobs\030162-McCall_Portland\03016201\03016201-16.dwg FIG 7

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 7
Benzo(a)pyrene in Groundwater
McCall Oil and Chemical



ANCHOR ENVIRONMENTAL, L.L.C.

Figure 8
Chlorinated Solvents in Groundwater
McCall Oil and Chemical